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ATTEND THE NATIONAL CONVENTION OF THE MASTER PLUMBERS AT EVANSVILLE!

THE thirty-fifth annual convention of the National Association of Master Plumbers will take place at Evansville, Indiana, on June 19th, 20th and 21st.

Representative men of the trade will travel from the four points of the compass to the second largest city of Hoosierdom, where they will find this year's convention of peculiar and distinct importance.

Patriotism as well as business will necessarily become a part of the program and deliberations of the convention, for never before in American history has such an opportunity been presented to demonstrate to the world the real patriotism of the business men of this country.

As the National Association of Master Plumbers is one of the few organizations, which have undertaken to hold a convention during the period of the war, the efforts of the directors should be supported by the members.

The association is emerging from its ordeals in connection with the federal suits brought against it during the past few years. It has taken new heart and its progress should be supported and directed by its members.

Since the adjournment of the last annual convention, the National Association has been called upon to mourn the death of one of its very ablest leaders, a man universally beloved among men of the trade. We refer to the late S. Louis Barnes, past national president. He it was who guided the association through its first battles with the legal forces, which were threatening to disrupt the organization. His wise counsel, his kindly tact and his methods of leadership made him a powerful force in the upbuilding of the association. He will be particularly missed at the coming convention, but the memory and influence of his good works will be present to inspire and guide the officers and members.

An important feature of the convention will be the exhibits of the supply fraternity, which will be displayed in the Coliseum, the building where the business sessions will be held. Delegates and guests are sure to be interested in the scope of this display.

The national officers are very desirous of having a large attendance at the coming convention. All members of the association, who can possibly get away from business responsibilities, are urged to come to Evansville.

The review of trade progress during the year, the new problems which the association and business men generally will have to solve during the future months, should be of vital interest to plumbing contractors. Attendance at the convention will therefore be of educational value to men of the trade, who desire that healthy business conditions should continue during the period of the war.

Evansville as a convention city is easy of access by railway, and members, their wives and other guests can enjoy all the recreation of a vacation during their stay in this attractive Hoosier city.

The importance, which is attached to the 1917 convention of the National Association, should undoubtedly attract a large and representative attendance.

Plumbing Traps and Their Ventilation

Different Types of Drain Traps, Their Construction and Efficiency, with Notes on Various Venting Systems

By HAROLD L. ALT

Continued from Page 286 in the May 26th Issue.

The syphonage of a trap may be from causes either internal or external. By this is meant that the flow of water through the trap will in itself set up syphonic action or that syphonic action may be induced in the trap by the discharge of another fixture altogether.

Referring to Fig. 32 it can be readily seen that the filling of the waste pipe with a solid column of water

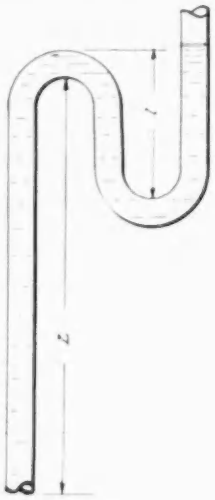


Fig. 32.

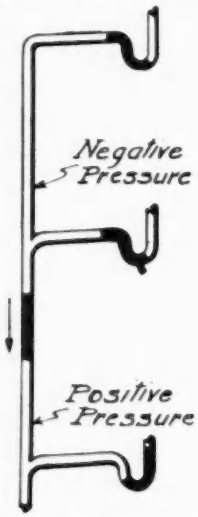


Fig. 33.

would produce syphonic action owing to the leg "L" of the syphon being longer than the trap leg "l."

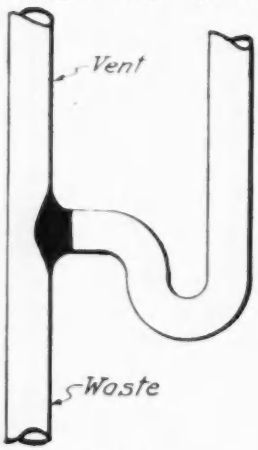


Fig. 36.

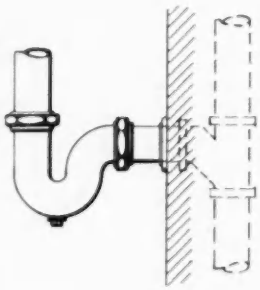


Fig. 37.

The above is termed self-syphonage," but in Fig. 33 the filling of the waste line with a solid column of water will not only syphon the trap through which the water comes, but—in falling down the vertical stack—the water becomes a veritable piston compressing the air in front of it and producing a partial vacuum behind it. The pressure in front may break the trap seals below from what is termed "back-pressure" and the partial vacuum above may also syphon the traps most subjected to its action.

It is a well-known principle that to break syphonic

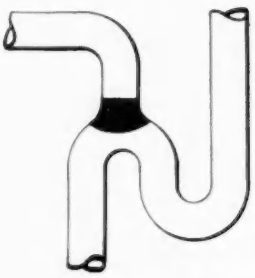


Fig. 34.

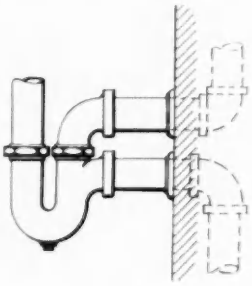


Fig. 35.

action air must be introduced at the high point of the syphon, and from this has developed the present systems of venting or trap "relief" pipes. Originally the vent, or so-called relief pipe, was connected to the theoretically desirable point of air admission, viz. the crown of the trap, as shown in Fig. 34—which is called "crown venting"—a typical application to a lavatory being shown in Fig. 35. Objections were found with regard to such connections, however, and crown venting was modified into what is generally termed "continuous venting," owing to the vent being a continuation or extension of the waste pipe. This is illustrated in Fig. 36 and indicates that the vent is connected to the waste pipe at some distance back from

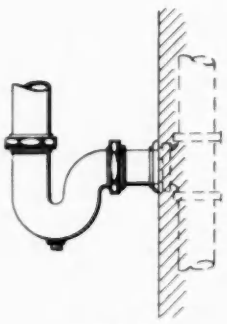


Fig. 38.

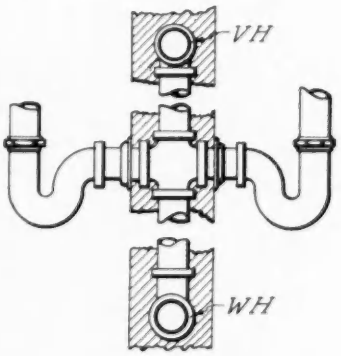


Fig. 39.

the trap; it is generally conceded that with the common trap the distance from the trap to the vent should not be over 18 inches, although sometimes a distance of 24

inches is permitted, where it is absolutely necessary. Applied to a lavatory with a sanitary TY this venting appears as shown in Fig. 37, while with a basin tee it looks as shown in Fig. 38. Double lavatories, i. e. back to back, are generally connected up as shown in Fig. 39 in which V-H is a horizontal vent header and W-H a horizontal waste header.

The main objection to the crown vent was that, connected at the point it was, all sorts of lint, dirt, grease and other solids were thrown into it; this hardened in a short time into a plug which effectually stopped off the vent pipe and prevented the very relief to the trap for which it was installed.

Traps may lose their seals from other causes besides back pressure and syphonage. A little lint laying over the crown may gradually withdraw the water by capillary attraction; the water may be lost by evaporation; the trap screw may leak enough to drain the trap drop by drop, etc. It should be the aim of every sanitary designer to install a trap with a water seal for each and every fixture and then to do his utmost, within reasonable limits, to see that the seal is kept permanently.

The non-syphon trap has been developed to satisfy conditions where venting of any sort is impractical except at considerable distance from the trap. Such conditions are quite frequently met with, a good example being a group

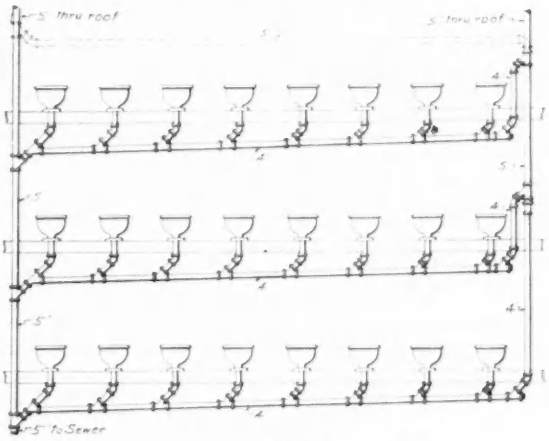


Fig. 40.

of barbers' lavatories set in the middle of the room, a sink set in a counter, etc. In such cases a special trap should be used which, by means of a large body of contained water, or by some other means, either resists syphonic action or retains enough water to replace the seal after it has been syphoned.

All drainage systems may be roughly divided into two kinds, the circuit or loop vented system and the continuous or back vented system. As a general thing a house trap and fresh air inlet are installed with the continuous or back vented system while the circuit or loop vented design usually dispenses with this feature. The principal exception to this statement is founded on the colder climates of Canada and Alaska where circulation of air from the street sewer up the vent stack in the buildings becomes so excessive in cold weather and the air circulated at so low a temperature as to result in freezing up the sewers unless house traps are used.

The simplest and most economical plumbing system to install is the circuit or loop vent system as adopted by the U. S. Government and several American municipalities. The ideas in brief consists of using a main stack carried through the roof and the relief of all horizontal branches more than 5 ft. long by carrying the branch up through the roof separately as another vent or by connecting it back into the main vent stack above the top of the highest fixtures connected thereto.

The circuit or loop system is illustrated in Fig. 40 which shows the main soil stack being carried up through the roof and the first floor fixtures vented by the vent stack at the opposite end which is also carried through the roof and forms a circuit vent, while the second and third floor fixtures have a vent connected to the vent stack 3 ft. above the floor; carrying the vent into the main soil stack on the third floor ceiling as indicated in dotted lines will form a bona fide loop vent.

To be continued.

THE PERENNIAL PLUMBER JOKE.

By A Retired Master Plumber.

The plumber joke refuses to die. It springs forth into fresh recrudescence from time to time, with apparently no regard for seasons or habitat. Every poetaster, hack joke writer, and would-be humorist, seems to pounce upon it every time his think wheels refuse to spin, and something in the shape of copy must be ground out.

This is not so bad for the professional jokesmiths. After all, the genius of originality and fresh creation is a rare quality. If the publishers of our popular magazines and foolishly-funny periodicals did not have their hack contributors to fall back on they would soon be in panic for want of material. No, we can excuse the hack. It is the editors who are to blame. They should know that the plumber joke is now more trite than the mother-in-law one. They should know that even a joke will get old and decrepit, and desire to peacefully retire or to die a painless death.

The June 2nd issue of "Judge" contains a six stanza verse entitled, "Two Trades Compared." The near-poet takes for his theme the fancied high-handed methods of the plumber, by which he leaves his helpless victims bereft of their dollars, in contrast with the writer of sublime lines and heart-stirring emotionalism, who finds it difficult to meet with any appreciation or reward.

We will quote one of the stanzas:

"I seek to elevate the mass,
But raise them not a fraction;
The Plumber holds them up, alas!
And profits by the action."

The others are in the same vein.

It seems certain that if there were any concerted action by the master plumbers of the country in expressing their disapproval of this continued libel of their trade, it would soon die out. If the editors of these publications were to receive a goodly number of letters voicing the courteous though emphatic objection and resentment of master plumbers to this unending misrepresentation, they would doubtless heed them. Editors, as a rule, are considerate and fairminded. The master plumbers of the country should feel it their bounden duty to constitute themselves into a sort of truth society, which will make its protests felt every time one of these reflections appear in print.

A Boomerang.

"That's a good one on Jokeleigh."

"What's happened?"

"He had an insurance policy on the contents of his cellar and he thought it funny to put in a claim when he had burned all his coal."

"What did the company say to that?"

"Had him arrested for arson."—Boston Transcript.

Points on Central Station Heating

A Comparison of Steam and Hot Water

By CHARLES L. HUBBARD

EACH type of system has its advantages, which may commend it more strongly in one location than another. In general, it may be said that either is adapted to the average city or town, except where the presence of hills or very high buildings would produce too great a static head upon the various parts of the system, if hot water were used.

Taking up the two systems separately, it may be said that the cost of installation and maintenance of plant is less for

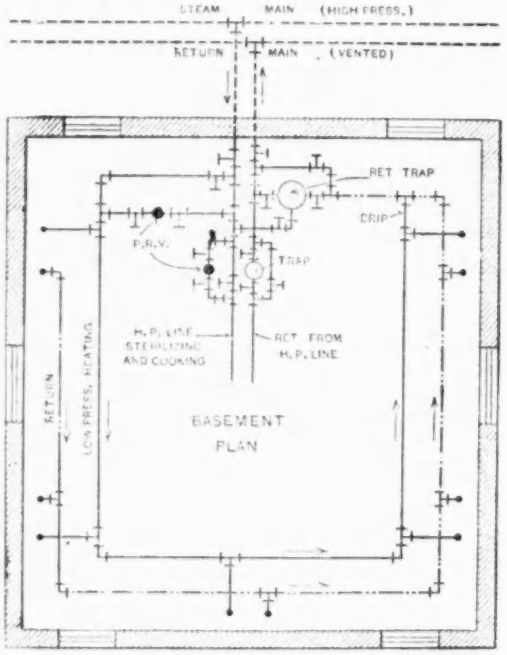


Fig. 1—Typical Basement Connection with Central Heating Plant, where the Pressure is Reduced in Each Building.

steam, and it ordinarily operates at somewhat higher temperatures, thus calling for less radiating surface in the buildings.

In the case of central heating applied to buildings already in use, steam has the advantage that it may be used in a system of radiators designed either for steam or hot water, while water can only be circulated through a system designed especially for it.

Steam is capable of providing more general service, in the way of cooking, heating water for laundry purposes, etc. One of the most important features in connection with steam as compared with hot water is the ability to measure the amount used by means of a meter. When the rate to customers is based on the square feet of radiation supplied, a good deal of heat is wasted by keeping the radiators on at night and by the opening of doors and windows rather than closing the radiator valves in mild weather. It has been shown by experience that the use of meters, and proportioning the charges to the steam actually used will greatly increase the care of the customer as regards waste, and often reduce the amount used from 25 to 50 per cent.

Among the disadvantages of steam is the difficulty of temperature regulation without expensive apparatus. While it is true that steam is often supplied at different pressures, according to the outside temperature, the range is small, a variation of five pounds, which is about the maximum, changing the radiator efficiency only about 10 per cent.

The conduit loss is greater than with hot water, both because of the higher temperature and also because it is at practically the same temperature at all times, while with hot water this is varied according to requirements.

Another loss in many steam systems is the practice of trapping the condensation from each building to the sewer instead of returning it to the boilers. The reason for this is the avoidance of expensive grading of pipes which would be necessary if the condensation was returned by gravity to the power house. In some cases this loss is reduced somewhat by passing the condensation through an indirect heating coil and extracting a considerable portion of its heat before discharging it to the sewer. When pipes are graded and condensation returned, the cost of excavation will greatly exceed that for hot water pipes which may follow the contour of the surface at a proper depth.

Another difficulty in using exhaust steam in a central system is the large amount of moisture which it contains in suspension at low pressures. This water has no heating value but is recorded by the meter, thus giving a false record, which often causes much dissatisfaction on the part of the customer. This may be avoided to a considerable extent by passing the steam through a simple separator before it reaches the meter and trapping the waste to the sewer. If the steam could be supplied through the mains at a pressure of 10 or 15 pounds and reduced in each building to one or two pounds as needed, dry steam would always be furnished (see Fig. 1). This, however, cannot be done when exhaust steam is used on account of the back pressure which would be thrown upon

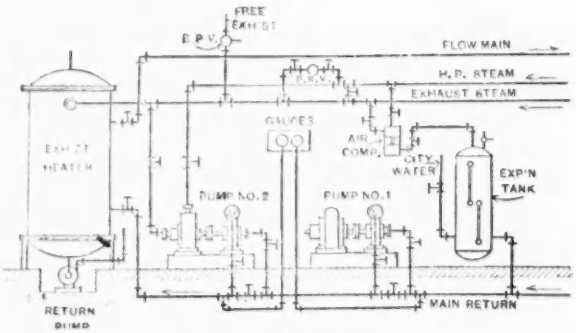


Fig. 2.—Connections at Pumps and Heater, where a Single Heater is Used in Forced Hot Water Circulation.

the engines. Even with pressures of one to five pounds, the matter of back pressure is a deciding factor between steam and water heating in some instances. In the case of hot water, its temperature is raised to the desired point by passing

it through a heater, in which the steam is condensed in a manner similar to that in an ordinary condenser.

Although these heaters are usually of the surface type, as illustrated in Fig. 2, the water is sometimes heated by direct contact with the steam as in a jet or barometric condenser. While a high vacuum cannot be obtained in this way, owing to the comparatively high temperatures of the condensing

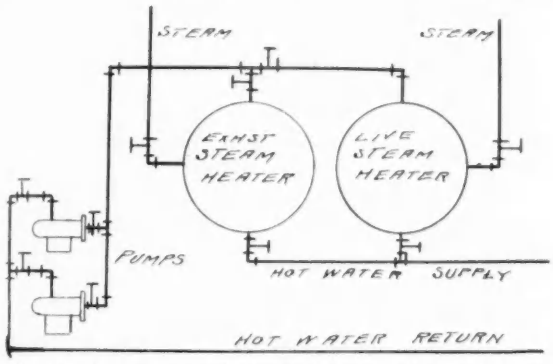


Fig. 3.—Arrangement of Primary and Secondary Heaters in Hot Water Heating.

water, it is possible to run at a back pressure either at or slightly below that of the atmosphere, which gives this method of heating an advantage over steam so far as this point is concerned. When it is desired to operate under a low vacuum, say five or six pounds below atmospheric pressure, a primary heater may be placed between the engine and condenser, passing the return water through this first, and then through a supplementary heater supplied with exhaust from the auxiliaries or with live steam for bringing it up to the final temperature desired (see Fig. 3).

As the weather grows warmer, and lower water temperatures are required, the vacuum may be increased up to a maximum of about 26 inches of mercury which corresponds to a temperature of 126 degrees. A hot water system may also make use of the heat in the waste flue-gases, which is not possible with steam except where the condensation is thrown away and an economizer used for heating the feed

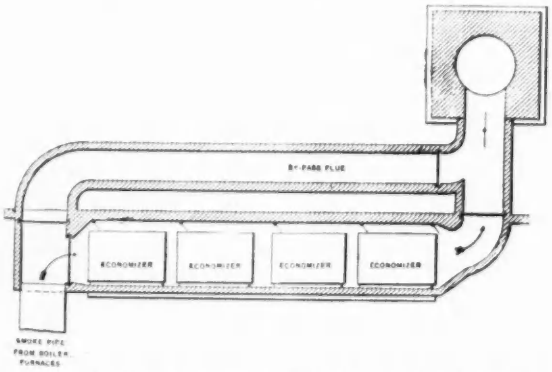


Fig. 4.—Showing Arrangement of Economizer for Use in Connection with Hot Water Heating.

water (see Fig. 4). Hot water has the advantage of quietness of action, and comparative ease of regulation, as the temperature at which it is circulated may be easily controlled at the power house. On account of the large volume of water in the radiators and piping, and the large amount of stored heat, the system may be shut down for short periods in case of breakdown or repairs without discomfort on the part of the customers, especially if the pumps are kept running. As already stated, less excavation is required because grading is not necessary.

Among the disadvantages is the fact that the heat cannot be metered, and this is likely to result in a considerable loss, unless automatic temperature regulation is provided in each building. The requirements of more heating surface and the necessity of overhauling steam systems to adopt them to hot water have already been noted. In any case, whatever system is used, care should be taken to determine if the radiating surface in all buildings is sufficient in amount to properly warm them in the coldest weather with the steam pressure or water temperature to be carried. If not, the piping and radiation should be put in a condition to do so before connection is made with the central plant, else the occupants will hold the company responsible for insufficient heat. When the rate is based on the square feet of radiating surface it is customary in some cases to estimate on the amount of surface which the building *should* have instead of what it actually contains.

Questions and Answers

REMEDY FOR NOISE AND IMPERFECT CIRCULATION IN PECULIAR PROBLEM OF HOT WATER SUPPLY.

Editor "Domestic Engineering:"—Figure 1 is a sketch of a hot water boiler set up in a bath room, which is connected with water front in range. The circulation pipe runs up to about 3 inches from the ceiling and continues on a rise up to the point where it drops to boiler, a distance of 10 feet. The return pipe drops from stove to cellar, runs along cellar ceiling, then up through floor in bath room and connects to boiler. My customer complains of a terrible noise, and when the city shuts the water supply off, which happens often, the circulation

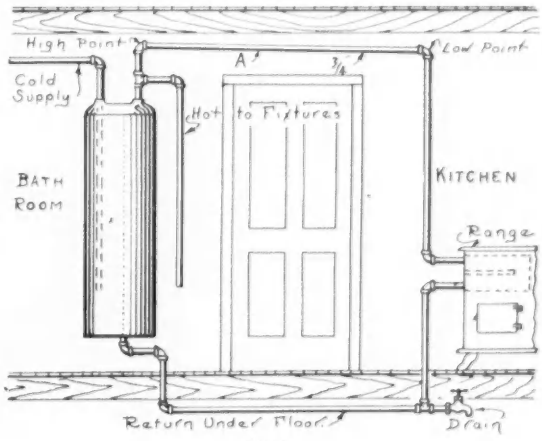


Fig. 1.

stops entirely, and only cold water is drawn, although the circulation pipe is very hot.

Kindly advise me, through the columns of your valuable paper where the trouble lies. I have put in many such jobs which work satisfactorily, but I am at a loss to know my trouble here.

N. C. Shop Mate.

The flow pipe A, which runs at kitchen ceiling, is air bound, and naturally the circulation cannot be right, even when full water pressure is on. And when the water is shut off there positively can be no circulation between range and boiler, because the water is drained down to

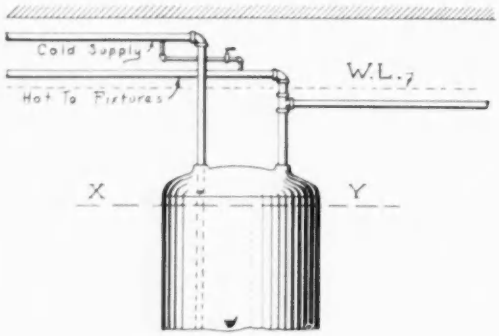


Fig. 2.

level of top of boiler. The pipe at ceiling, therefore, is quite empty when the water is shut off at street.

It is evident that the noise comes from the defective circulation. And the lack of heat in boiler also is due to the defective circulation. To obtain proper circulation under the conditions referred to and shown in Fig. 1 is a problem.

The best remedy, of course, is to set the boiler alongside the range and connect the water back flow pipe into

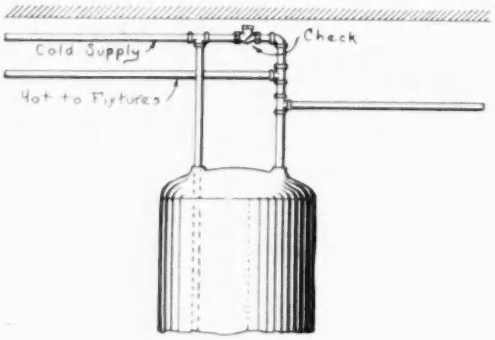


Fig. 3.

its side, tapping in the ordinary manner. This will insure reasonable freedom from noise, and a proper heating of the boiler, whether the street water is shut off or not. But if the boiler must stay where it is, and if the flow pipe cannot be lowered close down to top of boiler, then, perhaps, the next best thing to do is to raise both the hot and cold water pipes, and by-pass them together at highest point with a ¼-inch pipe having a throttling stop cock attached, as in Fig. 2. With an arrangement of this kind the hot water pipe to fixtures draws all air out of circuit between range and boiler.

And when the water is shut off in the street the boiler will only be drained down to the level W. L., instead of down to X. Y., which, no doubt, occurs at present. The air short circuits from hot water supply line to cold water supply line, breaking the siphonage on the boiler, thereby allowing water to remain in boiler and connections up to the new water line, W. L.

But the small cock must not be opened too much, or too much cold water may be drawn into the hot water supply line. It should be checked down to the point best suited to the work.

Possibly a light swing check valve would suit better, the check opening toward the cold water pipe, as in Fig. 3. This should positively prevent cold water from by-passing into hot water pipes, and still freely let air be drawn from hot water pipes directly into the cold water service line, when necessary to break the siphonic effect on boiler when street supply is shut off.

HOW TO HEAT RESIDENCE BY BOILER SIX HUNDRED FEET AWAY.

Editor "Domestic Engineering":—Pardon me for the liberty I am assuming in writing to you upon a matter of much concern to me and one of my customers. I am enclosing a sketch of the surface grade, etc., concerning the job in question. See Fig. 1.

The owner of a hospital asks that I supply his residence with steam heat, which, as the diagram shows, is approximately 600 feet distant. The surface fall is uniform between the two buildings and located on the same alley. A straight line of piping will therefore connect the two buildings.

The residence is now heated by a hot water, two-pipe gravity system, which is not satisfactory.

The steam boiler at the hospital is located in a room, seven feet below grade level. That is the floor of this room is of that depth. Boiler is a tubular type. I cannot at present state its correct horse-power, but assuming that same is of ample capacity to serve both buildings, how can the change be made, or what would need be the form of installation necessary to heat both buildings? Would it require two lines of piping between the two buildings, a supply and return, or would a steam trap, located at residence, fulfil the requirements of this case?

If you can straighten me out upon the fundamental requirements of such a proposition, advising if a success can be made of the undertaking along lines that you may deem best suited, I will surely appreciate your help in a very grateful manner. Expense seems to be a secondary consideration with my customer; he wants to know if such a scheme may be successfully consummated in all respects.

I am a close reader of your magazine, have looked through my past issues on hand for information of this character, but do not seem to find any article dealing with just such a matter. I feel satisfied same can be accomplished with

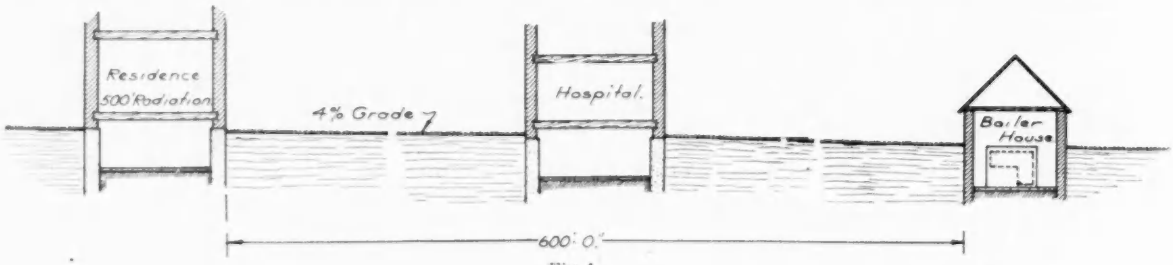


Fig. 1.

good results by a more competent heating engineer, and I therefore seek your advice.

Colorado. W. E. S.

There should be no difficulty in arranging the piping for this job so that the residence can be economically supplied with steam from the boiler, which is now used to heat the hospital, as referred to in the above communication. Fig. 1 illustrates the sketch submitted by correspondent, giving a general idea of the location of the buildings, elevations, grade, etc. If our understanding of the work is correct, we would recommend that the heating system in the residence be changed to a one-pipe gravity system with a single steam main making a circuit of the basement, terminating at a point near where the steam main enters the basement of the residence. The hot water radiators now in use can be utilized for steam by changing the position of the air valves. A hot water radiator, when used for steam, must be vented on the return end at a point about one-third of the height of the end loop or return section. For this installation we would recommend that the radiators be connected one-pipe, and it is entirely probable that the present flow risers of the hot water system are sufficient in size for this purpose, but the lateral branches from the circuit main in the basement connecting with the risers or radiator connections must be one pipe size larger than the pipe which they supply.

We are obliged to assume some of the conditions of this work. Correspondent does not say whether the present pipe line from boiler room to hospital building is sufficient in size to care for the residence in addition to the hospital. If a supply line of ample size at present runs to the hospital, a connection for the residence heating may be made in the basement of the hospital from this supply line and a new pipe line run under ground in a conduit from the hospital to the residence. After making a circuit of the basement of the residence the return from the end of the circuit should connect into the ordinary common trap and from the outlet of the trap a return line to the basement of the hospital may be run, which should closely follow location and direction of the steam line. The general method suggested is shown by our sketch, Fig. 2. It is essential that both flow and return lines be properly insulated, and we suggest by Fig. 3 a method of boxing these pipes and of providing drainage from surface water. This is what is ordinarily called a single French drain and is inexpensive to construct, the tile used being porous farm tile. The planking shown is 2-inch chestnut, which should be properly treated with creosote.

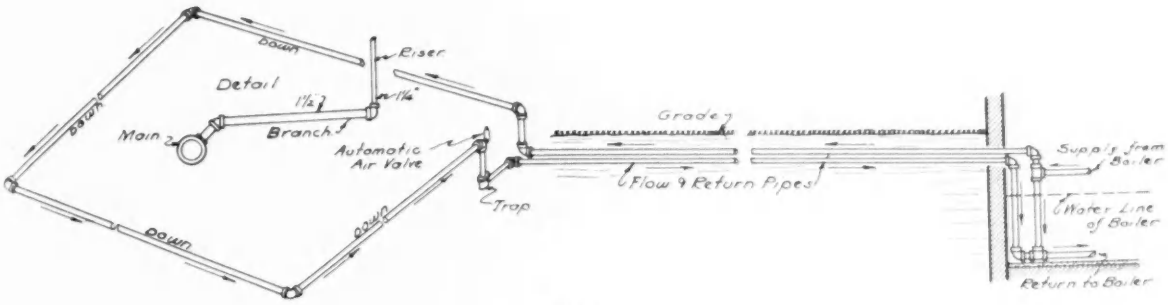


Fig. 2.

As there will be considerable expansion of a pipe of the required length, it may be well at one or two points on the line to construct a cement pit with an iron or wood covered manhole at the top, this manhole, of course, being even with the grade; Fig. 4 shows the construction of a pit of this kind, and in this cement pit place expansion joints on both flow and return pipes. The conditions of the work may be such that expansion joints can be provided in the basements at each end of the line, and, if so, the pit and expansion joints may be omitted.

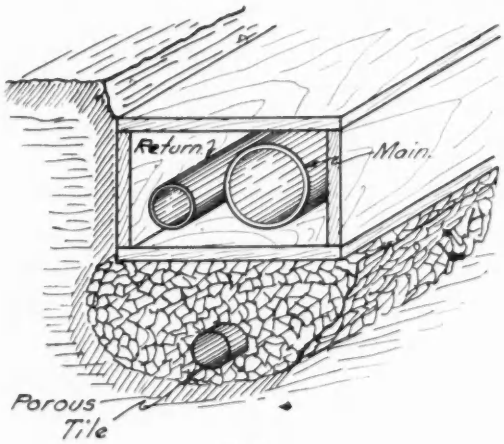


Fig. 3.

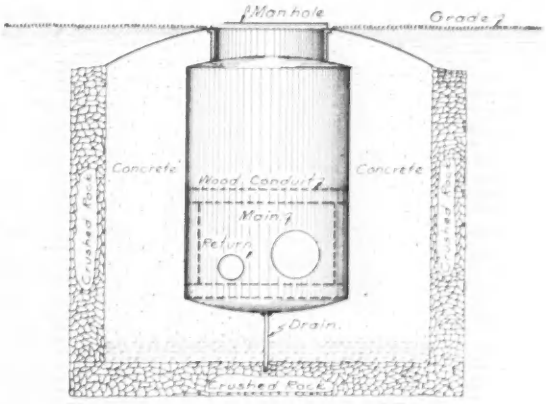


Fig. 4.

It is unnecessary to run two pipe lines from the boiler, if one pipe line is large enough for the service required, and as the pipe line to the residence will pitch upward from the boiler room or from the basement of the hospital, it will be necessary to provide a drip at the lower end of the main (in the nature of a heel drip) in the boiler room or in the basement of the hospital. Assuming that the steam main is to start from the basement boiler room, the connections would be made somewhat as we have shown by Fig. 2, which shows an elevation of the boiler room, the boiler and return connections.

Note that the return from the heating apparatus enters the boiler room, drops down and returns to boiler, and the heel drip from the steam supply main drops down and connects into this return pipe below the water line of the boiler.

In answer to correspondent's question as to whether the work would require two lines of piping between the buildings (a supply and return), would say that while the condensation might be trapped into and return through the main steam line the condensation would necessarily return against the steam, causing friction, and would also more or less saturate the steam. Consequently it is better to separate the condensation and provide a separate return line for it. It, of course, would be well, in making the trench for the accommodation of this pipe line, to excavate sufficiently deep to get somewhat below the frost line, although if the piping was thoroughly insulated this would not be necessary. It might be that in attempting to get below the ordinary frost line the main pipe would be so low as to be too close to the water line of the boiler, and the only method therefore available would be the thorough insulation of the piping.

As the building of a French drain and the boxing insulation of the piping will entail considerable expense we might recommend that correspondent obtain a wood stave pipe covering made of wood segments bound with wire and treated with creosote and other matter which make the wood impervious to water or frost.

Swimming Pools in Public Schools

Boards of Education in Large Cities Recognizing Value of Sanitary Facilities to Promote Habits of Personal Cleanliness

EDUCATING pupils in the value of personal cleanliness, as a means of promoting health and hygiene, which in turn stimulates added mental efficiency, the Chicago Board of Education is carrying out a policy in public school education which is proving a constructive force in the making of future citizens.

Other large cities throughout the country have adopted or are adopting similar policies in the scheme of popular education for the young. In New York City much progress has been achieved along this line, and today we find, besides the indoor pools, those which have been constructed in the open, on school roofs and within inclosures with the sky as a canopy. One of the latter types of pools is shown herewith in Fig. 1.

Fig. 1.—Typical Outdoor Pool in Public School in New York City.

Sanitary engineers and representatives of the plumbing craft were advocates of swimming pools in the public schools years before these facilities were installed, and today men of the trade, along with other citizens, are interested in the movement to provide all public schools with pools and not restrict them to the poorer and thickly populated parts of the city.

The swimming pools in Chicago's public schools are operated on the dilution system. The water is not recirculated, but is discharged direct to the sewers when it leaves the pool. The pools are filled on Sunday, ready for use on Monday morning, and are used every school day, boys and girls using them on alternate weeks.

The dimensions of the typical swimming pool in the public schools of Chicago are 60x24 feet, the depth being 3 feet at the shallow end and 8 feet at the deepest point.

In the Normal College, at Sixty-ninth Street and Stewart Avenue, there are, besides the pool, shown in Fig. 2, 108 showers. At the Carter Practice School there are 6 showers and the pool shown in Fig. 3. Both schools are public institutions.

The temperature of the water is kept at 76 degrees F., while that of the room is maintained at 80 degrees F., in order that chilliness and excess humidity of the air in the swimming pool room may be prevented.

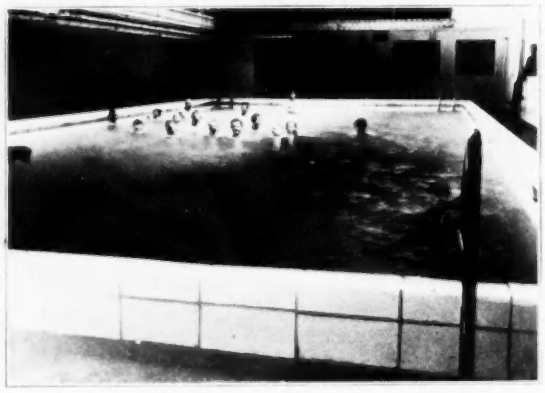


Fig. 2.—Indoor Pool in Normal School in Chicago.

Each of the pools holds 60,000 gallons of water and is equipped with filters and heating systems to handle 5,000 gallons per hour.

After the water is heated, the filters receive it. If the water is filtered before it is heated, a certain amount of lime precipitation will break down upon heating and be deposited in the pool. Alum is used as a coagulant.

Ten thousand gallons of water are fed into the bottom of each of the pools daily, carrying away all the expectoration, scum and waste material into the scum gutter, from whence it flows into the sewer.

Twice a week, Tuesday and Thursday evenings, the night engineers are required to sterilize the water with a

solution of calcium hypo-chloride, which upon introduction into the water releases free chlorine, one of the best germicidal agents.

Every Friday evening the pools are drained and cleaned with brushes, brooms and squeegees, ready for refilling with fresh water on Sunday.

The city health department has made an analysis of the water in these school swimming pools, and has found that it is entirely devoid of colon bacteria. It has been found, however, that during the week that the girl pupils use the pools the water is contaminated more than during the boys' week, due to the fact that the girls go in with bathing suits taking their shower baths prior to going into the pool. The boys go in nude, and thus carry less foreign matter into the pool than the girls.

"Our test for determining the clarity of the water is dependent upon our ability to see a ten-cent piece through

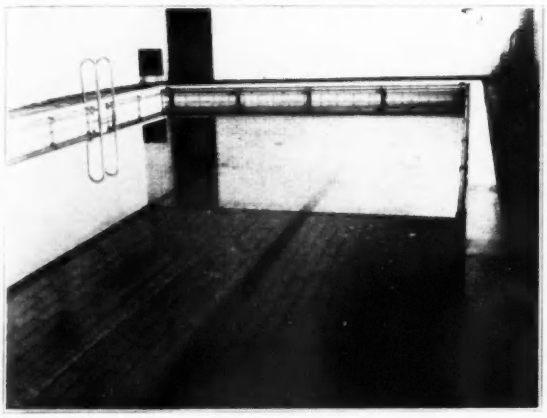


Fig. 3.—Indoor Pool in the Carter Practice School in Chicago.

the pool in eight feet of water," says John Howatt, chief engineer of the Bureau of School Engineering, Chicago Board of Education.

"The pools are constructed along durable and modern lines and finished in white tile. The showers are built adjacent to the pools.

"There are at present ten swimming pools in the public schools of Chicago and more are now under construction. Chicago, therefore, is keeping pace with New York City and other great centers in its recognition of the importance of this form of practical sanitation."

LEGAL DECISIONS.

Common Pleas Court Declares Freedom Plumbing Ordinance Unwarranted and Invalid.

Judge P. J. Baldwin in the Court of Common Pleas of Beaver County, Pa., on Monday, June 4, handed down the following decision in the case of Guy E. Shoemaker vs. Borough of Freedom: This case involves the validity of Ordinance No. 175 of the Borough of Freedom. This ordinance was passed by the town council on May 3, 1915, approved by its burgess on May 12, 1915, and is entitled "An ordinance of the Borough of Freedom providing for the appointment and maintenance of a board of health, defining its powers and duties and its relation to the borough council and to the people of the borough for the protection of the public health, and providing penalties for the violation thereof." The ordinance purports to rest on the authority conferred by the Act of Assembly approved June 12, 1913, P. L. 471. Article 2 provides, in sections 1 and 2 thereof, for the appointment of a board of health by the president of council and for the annual appropriation of funds for the proper performance of their duties. Then follow articles of the ordinance covering powers and duties of the board, the duties of health officers, etc. Article 16 is as follows:

"No person shall engage in, or continue in the business of plumbing or constructing systems of house drainage and cess-pools, either as master plumber or journeyman, until he has registered his name with the board of health and received a license to carry on such business, or engage in such work within the borough; and for such license each master plumber shall pay the sum of five dollars, and each journeyman the sum of one dollar, per annum."

The plaintiff is a plumber and was prosecuted and convicted for carrying on his business without the license required by said article. The burgess of the borough fined him $5, whereupon, this writ of certiorari was sued out, in order that the judgment might be reviewed.

The act of June 12, 1913, by authority of which said ordinance was enacted, repealed all former acts on the subject. Section 14 of the act repeals in terms the act of May 11, 1893, and "all other acts, or parts of acts, inconsistent herewith." It has been held that by necessary implication it repealed the act of June 24, 1895, authorizing boards of health in boroughs to regulate house drainage and require the registration of plumbers (Hutchinson vs. Borough of Wilkinsburg, 62 P. L. J. 422). Nowhere does the act give the borough council authority to adopt such regulations. The ordinance in question, therefore, is invalid, so far as it depends upon the act of 1913 for its authority, as it does not even purport to approve rules and regulations adopted by the board of health of the Borough of Freedom. The borough council cannot originate such rules; it can act only through the officials designated in the act of 1913. Counsel for defendant in error argues, however, that so far as the article requiring plumbers to be licensed is concerned, the borough council has power to enact the same. It is true that borough councils have the authority "to make such * * * regulations as may be necessary for the health and cleanliness and the beauty, convenience, comfort and safety of the borough." It is also true, as argued by counsel, that the matter of drains, cess-pools and sewers is, both by statute and inherent power, within the control of the municipal authorities, and the work of a plumber is closely allied to the construction and maintenance of such work. A borough ordinance well might regulate, in a general way, along these lines; and it is doubtless important to the public health that plumbing in houses and other buildings and the connections of same with common sewers should be done by competent persons. But the article in question does not attempt to legislate respecting vaults, cess-pools and drains; it does not regulate the construction of what the plumber does; it is directed at a business or trade, and in fact is not a regulation of anything. Neither can the article be justified as an exercise of the police power. It does not provide for the inspection of anything. It does not direct or require the secretary to make any inquiries or apply any tests or standards as to the fitness of the applicant; nothing is specified which is made the ground either for granting or refusing a license. We are of opinion that the town council had no authority to enact the article in question; and the conviction of the plaintiff in error was, therefore, unwarranted and illegal. Now, June 4, 1917, the judgment of the burgess is reversed and set aside, by order of the court.

Sales Sense in Fable

By WILLIAM ROBERT MARSHALL

Continued from Page 289 in the May 26th Issue.

Intense Desire.

THE boys, Jimmie and Tommie Whatstheuse, Don Copper and Gladys May, had gone down stairs to Jimmie's office to start their regular Friday night class for the study of scientific sales management. Pa Whatstheuse had lighted his old corncob pipe and settled down in his big cretonne covered chair that the children had given him last Christmas. Ma Whatstheuse was busy sprinkling the day's washing preparatory to the morrow's ironing.

"I am surprised at you, Maw Whatstheuse, that you should encourage Tommie to throw up his good job in the shipping department of the City Plumbing Supply Co. to—to—go to work for Jimmie in the plumbing shop," growled the old man in disgust.

"It ain't the first time you should be surprised over what I do, is it?" nonchalantly inquired Maw.

"Just the same, this time I am surprised; Tommie got a good job and maybe he gets a better one pretty soon. Just the other day Mr. Jameson said to me, 'You got a fine family, Mr. Whatstheuse, and we think a whole lot of your boy, Tommie, down here.'"

"Yes, I know, they think so much by Tommie he works for fifteen dollars a week for two years already, and your family got to be a fine family just so soon Jimmie gives Don Copper a big lot of plumbing business, ain't it?"

"What for are you so anxious Tommie should quit his job?" demanded the old man, ignoring the question.

"I want he should learn the plumbing business with Jimmie, so he can some day not care whether Mr. Jameson thinks he has got a fine family or not," Maw sarcastically replied.

The old man removed his pipe and feverishly wet his lips. "This business cannot support all three of us," he stated with an air of finality.

"You leave this business to Jimmie," retorted Maw. "If Jimmie says Tommie should quit his job by the City Plumbing Supply Co. and go to work for the Whatstheuse Plumbing Co., I guess maybe he knows more what he does than you or me."

"What—what—" began Pa.

"Never mind what!" interrupted Maw. "I know what. That's what a man who works by a shipping department gets every Saturday night—what?—a pay check, and Monday morning all he's got is a job, maybe, if he keeps sober. While by a business, well, he's got a business, maybe such a punk business you got before Jimmie takes a hand, anyway a business."

"Ach Himmel!" snorted the old man. "Such a foolishness to hear you talk. Already one should guess you, too, was talking to ghosts."

"If I was in your shoes, Pa Whatstheuse, I guess maybe I wouldn't say nothing about ghosts, maybe one would tell you you broke your plate already with him," Maw satirically replied.

"Bah!" snorted the old man in disgust. "An old man like me should care to be afraid from such foolishness."

"Maybe if I showed you in the good book something, you should worry," Maw threatened.

"You couldn't show me something in the good book about such foolishness," dared the old man.

"So!" ejaculated Maw. "You wait."

"I got my health," retorted Pa, "so I can stand to wait a long time."

Maw rolled up the table cover she had just sprinkled, placed it upon a pile of neatly prepared washing, wiped her hands upon her apron, walked over to the mantle, took her glasses out of the imitation Wedgewood vase and started for the parlor to secure the family bible.

"I guess maybe the last time you looked in this was when you wrote the date of Gladys May's birthday," she scornfully shot at Pa, as she laid it on the table before him and began to turn the pages in her search for the evidence that was going to show him "something."

"Put on your glasses and read this," she commanded, as she handed him the bible with her finger on the verse she had selected.

Pa slowly reached up to his head and drew down his glasses and read as commanded:

"And it shall come to pass afterward, that I will pour out my spirit upon all flesh; and your sons and your daughters shall prophesy, your old men shall dream dreams, your young men shall see visions."

"I don't believe it," he finally barked.

"What the matter is with you, Pa Whatstheuse, is you don't dream dreams, or you should know Jimmie sees visions, and your own wife and daughter can prophesy. Working for a shipping department anyone can see ain't good for a boy what's got a chance to go into business with his own brother, *who can* run a plumbing business, is it?"

"I don't know what's come over this family. I guess we got a bughouse," the old man declared, as he angrily slammed the book shut and threw it on the table.

"Certainly always we got a bughouse, but our bughouse now got some paint on it, and something in the ice box for breakfast," snapped Maw.

"I guess I go to bed now," yawned Pa as he arose from his chair and made towards his bedroom in shameless retreat from Maw's satirical bombardment.

"It's a good idea; maybe you ain't so old yet, you might dream dreams if you got more sleep," Maw shot at him in parting, and then she sputtered to herself, "A good job and a fine family, aber nicht."

Downstairs Jimmie Whatstheuse was dismissing the class. Don Copper had invited them all down to the corner drug store to have some ice cream. Tommie had excused himself with the plea that he needed the sleep more, and Jimmie had evinced a desire to do a little more studying. Don had expected them to decline his invitation, and the boys knew he expected them to, so Don and Gladys May strolled away as Tommie climbed the stairs to his bed, while Jimmie went back to his desk.

Lighting his pipe, Jimmie lay tilted back in his swivel chair, feet upon the desk, hands behind his head, apparently staring at a "Psyche at the Bath" upon a calendar above his desk which he didn't see.

"Desire," he mused, "is the incentive or motive for action *to gain possession.* Therefore the more intense the desire, the more powerful and ardent the action to gain possession."

"That's me," a "Voice" murmured beside him.

Jimmy sat rigidly still and blew a stream of smoke towards the ceiling.

"I am pleased to meet you, young man; allow me to introduce myself. I am Intense Desire, at your service," the "Voice" pleasantly assured him.

"*Intense* Desire," Jimmy whispered to himself contemplatively, and then suddenly conscious of the conjunction he said: "How natural that you should be General Desire's older brother."

"The most natural thing in the world," laughed the "Voice."

"In our study we have been seeking," Jimmie began eagerly, "the higher state of Desire, but for some reason we were not entirely successful. I am delighted to have you call upon me, Intense Desire, I assure you."

"Thanks for your cordiality," replied the "Voice." "I hope that I may be of some value to you in any way you may suggest."

"I believe I am gradually learning *how to think* for myself," Jimmie began modestly, "but it is somewhat of a task to understand just what to do with the result after it is gained. You know what I mean—I can reason out that such and such a thing *should be*, but I am not always sure that *it is*."

The "Voice" laughed merrily. "It's somewhat like having a charged cell battery and not knowing how to use it, isn't it? It looks like a —"

"Can of canned tar," laughed Jimmie.

"Exactly," agreed Intense Desire. "But when you know how to connect it, how to utilize it, it furnishes light, aids locomotion, connects distances and—and rings the bell, doesn't it?" laughed the "Voice."

"That's a bully simile," declared Jimmie; "and it applies right here at this time. I know that to accelerate action to gain possession it is necessary to create a condition of Intense Desire, but how? That's the big question, isn't it?" he asked eagerly.

"Just so," agreed Intense Desire, "and to *know how*, intelligently and scientifically, will get you to the point of successful achievement quicker and more affluently than a haphazard, rambling effort; will it not?"

"Decidedly!" agreed Jimmie.

"And I suppose you *desire* that I enlighten you," laughed the "Voice."

"*Intensely!*" replied Jimmie in a like spirit.

"All right!" began Intense Desire. "Suppose you permit me to take you back just a step and we will suppose that your efforts have brought a *prospective* customer into your store, and we will say that said prospective customer was prompted by a weak desire to make inquiry regarding the price and kind of article he had in mind."

"Ach Himmel!" snorted the Old Man. "Such a foolishness to hear you talk. Already one should guess you, too, was talking to Ghosts." "If I was in your Shoes, Pa Whatstheuse, I guess maybe I wouldn't say nothing about Ghosts, maybe one would tell you you broke your Plate already with him," Maw satirically replied.

"The state of weak or general desire is generally evidenced by a request for *information*, and you must be on the alert to satisfy and please that condition."

"I can see that plainly," Jimmie replied, "but please give me some pointers on how best to strengthen a weak or general desire into an Intense Desire."

"The best way I know of is to be *ready* to satisfy that request for information," answered the "Voice."

"In just what way?" insisted Jimmie.

"The first essential qualification is knowledge. By knowledge in this case I mean a thorough understanding of your goods. Possession of knowledge will thoroughly equip you to handle any emergency that may arise from a standpoint of satisfying the quest for information *intelligently*, *forcibly* and *convincingly*."

"I believe I am in pretty good shape to handle that requirement," Jimmie murmured to himself.

"Furthermore," continued the "Voice," "allow me to caution and advise you regarding your approach. A *polite* and *solicitous* greeting should be employed in every instance, and you *must assume* that your prospect is deeply interested and *is going to buy*, if satisfied. Many a prospective sale has been wrecked at the very beginning of the stage of Weak Desire by the attitude and indifference of the salesman, who *presumes* to know that the prospect is not a possible sale, but just a 'looker' or a curiosity hunter. But to create an intense desire it is not only necessary that you evince some concern in your prospects to approach, it requires *more* than a pleasing and courteous treatment; it demands that you have the goods to *satisfy* him and are able to *prove* to him that they are not only the goods he *should have*, but that they are *worth* the *price* you ask for them."

"Those are very good pointers," Jimmie exclaimed enthusiastically, as he brought his feet to the floor with a thump and began to make notes on the paper upon his desk, which had for its heading "Intense Desire."

"I hope I do not bore you," the "Voice" asked solicitously.

"I could stay up all night and never get weary listening to you," Jimmie graciously replied.

"I thank you, Mr. Whatstheuse, for your expression of gratitude, and I assure you that it is not with any intent of self-aggrandizement that I so speak, but rather with the desire to leave you with as clear an understanding as possible in regard to the necessity and value of recognizing and understanding the Desire family, with all their capabilities, limitations and efficaciousness."

"For which I am sincerely grateful," Jimmie assured the "Voice."

"To be able to recognize desire when you encounter it, will enable you to intelligently employ and exploit it to the best advantage, will it not?" quizzed the "Voice."

"Decidedly," answered Jimmie.

"Very well, that much is decided," stated Intense Desire. "But allow me to give you another pointer. When you are trying to sell your prospect a fixture, for instance, always *explain* what benefits he will *derive* from its possession. *Point* out the *comforts* he will *enjoy* from its possession, and *emphasize* the dependable *utility* of the fixture. Remember those points—the *benefits*, the *comforts*, the *quality* and *utility*."

"Try and make your prospective customer feel that if he does not buy *your* fixture, *he* is the loser. If you succeed, you will have created *intense desire*, which is the highest degree of desire, deep and strenuous, and creates an eagerness which calls forth a strained or exerted effort to *possess*.

"When you have created this intense desire, you have arrived at a critical stage."

The "Voice" stopped. Jimmie strained his ears for the continuance, but the "Voice" remained silent.

Finally he asked intently, "Have you gone?"

"Not yet, but soon," laughed the "Voice."

"About the critical stage," Jimmie asked anxiously. "Aren't you going to post me about that before you go?"

"My dear boy," expostulated Intense Desire, "my mission is finished when I have taught you all I know about Desire."

"But about the critical stage you spoke about," insisted Jimmie in desperation, "how will I learn to—to—know about that?"

"Well, I'll tell you what I'll do," the "Voice" merrily offered, "I'll send an old friend of mine around to see you."

"Is his name critical stage?" asked Jimmie excitedly.

"Hardly!" laughed the "Voice." But I don't mind posting you a bit; his name is *Price*, old man Price, the best known and least understood—but I am late. Good Night!"

June 12-15, 1917.—The ninth Annual Convention of the National District Heating Association at Detroit, Mich., with headquarters at Hotel Pontchartrain.

June 13, 1917.—The summer meeting of the Central Supply Association, at Detroit, Mich., with headquarters at the Statler Hotel.

June 19, 20 and 21, 1917.—The thirty-fifth annual convention of the National Association of Master Plumbers, at Evansville, Ind., with headquarters at the Coliseum.

June 20, 1917—Summer meeting of the Eastern Supply Association, in New York City.

July 18, 19 and 20, 1917.—The summer meeting of the American Society of Heating and Ventilating Engineers in Chicago, with headquarters at Hotel La Salle.

August 1, 2 and 3, 1917.—The annual meeting of the American Society of Sanitary Engineering, at Grand Rapids, Mich., with headquarters at the Pantland Hotel

FLORIDA MASTER PLUMBERS' CONVENTION.

The Florida Master Plumbers' Association held its annual convention at Tampa, Fla., on Monday, May 28th, with a good attendance. Among the legislative measures considered at the convention was the registration law which requires that every master and journeyman plumber must pass an examination. The amended state law has been in effect about two years, and the plumbers claim that the amendment which calls for the inclusion of towns with a population of 7,500 should be extended to include smaller towns also, a change which would be a step toward better sanitation.

The association elected the following officers for the ensuing year: President, H. A. Van Borssum, of Tampa, and secretary-treasurer, Joseph W. Fowler, of Jacksonville.

The convention city for 1918 will be selected by the officers at a later date.

The social features of the convention included an elaborate lunch at the German Club, where the convention was held, and a dinner at El Pasaje in Ybor City.

THE 1917 YEAR BOOK OF A. S. H. & V. E.

The 1917 Year Book of the American Society of Heating and Ventilating Engineers has just been issued, showing that the society now has a total membership of 775, a net increase of 70 members since the last Year Book was published. The Year Book calls attention to the fact that the society now has seven local chapters. This division of the society's work is a growing one and bids fair to have an important influence in bringing the public to realize the importance of the heating engineering profession. A change of some importance in the compilation of this Year Book is to be noted in the revised geographical list, in which the addresses of the members in each city are given, whereas in former editions only the name of individuals appeared. This will prove a great convenience to those using the geographical list. In sending the Year Book to members, Secretary C. W. Obert states that the society has 62 applications for membership under consideration, so that the year 1917 bids fair to show a marked increase over the activities of last year.

Master Plumbers of Wolverine State in Twenty-Fifth Annual Convention

Sanitary Craftsmen of Michigan at Grand Rapids with Representative Attendance—Edwin Sterner, of Flint, Elected President

THE Michigan State Association of Master Plumbers held its 25th annual convention at Grand Rapids on June 5th and 6th.

A representative and interested body of delegates hailing from the principal sections of the state was in attendance. The Detroit association, which has been re-organized, but which became separated from the state association last year, sent a delegation to the convention. The members of this delegation stated it as their belief that, before the next annual convention, the Detroit local would again be affiliated with the state body.

Tuesday Morning Session.

The convention was called to order in the local association hall at 11 a. m. by President James O'Neil. The delegates were welcomed to Grand Rapids by President S. A. Swart of the Grand Rapids association. President O'Neil then appointed the following committees:—

Credentials:—H. Thompson, Lansing; S. Mater, Marshall, and J. J. Keeley, Jackson.

Auditing:—F. J. Slooter, Grand Rapids, and Edwin Sterner, Flint.

Resolutions:—A. A. Muir, Kalamazoo; Theo. Gross, Lansing, and J. Miller, Flint.

Sergeant-at-Arms:—Benjamin Powers, Grand Rapids.

Tuesday Afternoon Session.

The afternoon session opened at 2 p. m., when Secretary Decker delivered an extemporaneous report relative to the various angles of interest in the government's suits against the National Association. He also referred to the

Secretary-Treasurer Wm. A. Decker, of Grand Rapids, and President-Elect Edwin Sterner, of Flint, Mich.

re-building of the Michigan association and stated that it was gradually growing in membership, until it will soon measure up to its former status. "The Michigan association is in much better shape today than it was two years ago when we adjourned in Detroit," said Mr. Decker. "The membership that is really worth having is composed of those members who come into the association because they believe in its constructive program. Such members are more desirable than those who have to be urged and coaxed into the association."

"We had considerable trouble looming up in labor circles last year. An increase in wages was due. We called a conference of the different cities involved. We acted principally in an advisory sense, and we struck a kind of common ground as to what was a fair wage in the average city, making due allowances for the smaller towns. We were instrumental in creating sentiment which tended to bring about the present prevailing rate of $4.50 for 8 hours' work."

The report of the auditing committee was read and

James J. Keeley, of Jackson, and F. G. Leadley, of Lansing, Mich.

accepted. The committee found the secretary-treasurer's books correct in every respect.

In the report of the credential committee the names of delegates to the number of 65 were read as being present.

Urges Purchase of Liberty Bonds.

E. W. Booth, publisher of the Grand Rapids Evening Press, delivered a rousing address upon the advisability of investing in Liberty Loan Bonds. "Money is the sinew of war," said Mr. Booth. "Uncle Sam is a wealthy old man, but he needs all the money he can get in order to win this war.

"The day will come when a war bond will be at a premium, and you will not regret that you invested in them. Even from a selfish point of view it will be a good thing for you. Not only are you helping yourself, but you are helping Uncle Sam to stimulate a greater degree of prosperity during the war.

"The stars and stripes is the best flag that was ever flung to the breeze, and we are therefore going to put it over in this war.

"There were Pro-Germans and pacifists before we entered the war, but let us all be Americans now. What is the best that Uncle Sam can ask for?—Why, that this loan be oversubscribed!"

Grand Rapids Local Buys War Bonds.

Wm. Praetorius, of Grand Rapids, announced that the local association had appropriated $1,000 to be used for the purchase of Liberty Loan Bonds. Secretary Decker then remarked that the same action would most likely be taken very soon by the state association.

C. P. Tietze, of Detroit, reviewed the circumstances that led to the disruption of the Detroit local, and how a new association was organized last fall, with a membership at the present time of about seventy. He stated

that the Detroit local had paid up all the old financial obligations and that its future prospects for a larger membership appeared encouraging. Mr. Tietze presented a check for one hundred dollars to Secretary Decker, as a token of appreciation from some of the old members of the Detroit local, and in recognition of Mr. Decker's personal losses, financial and physical, in the government's suits against the National Association.

Mr. Decker, while deeply appreciative of the sentiments of the Detroit members, was very desirous of returning the check, recommending that it be used as part of the fund for upbuilding the Detroit association. His recommendation was over-ruled, however, by the Detroit delegation.

Resolution Adopted.

The following resolution was presented by the resolution committee and passed by the convention:

"Resolved that, as soon as the National Association

L. H. Semeyn, A. A. Muir, M. Proos and W. J. Pulte, all of Grand Rapids, Mich.

completes its negotiations to definitely determine our legal status and rights, the Board of Directors of the state association is hereby given authority and full power to amend our constitution and by-laws in accordance with said legal views."

Election of Officers.

Under the order of new business the following officers were elected for the ensuing year:

President, Edwin Sterner, Flint; vice-president, Theo. Gross, Lansing; secretary-treasurer, Wm. A. Decker, Grand Rapids; Board of Directors: James A. O'Neil, Kalamazoo; A. A. Muir, Grand Rapids, and Theo. Gross, Lansing.

Delegates to the National Convention at Evansville: Wm. A. Decker, Grand Rapids, and James A. O'Neil, Kalamazoo.

Flint was chosen by ballot as the 1918 convention city.

Tuesday Evening.

On Tuesday evening at 8:00 p. m. "The Tale of the Tub" was shown in motion pictures by courtesy of the Standard Sanitary Mfg. Co., of Pittsburgh, Pa., at the Original Theater. Most of the delegates availed themselves of this opportunity to see every operation in the manufacture of enameled iron and vitreous china plumbing fixtures, etc.

List of Delegates.

The following delegates attended the convention, ten cities being represented as indicated:

Kalamazoo:—R. R. Brenner, James Wahl, James O'Neill and Harry Vanderwost.

Saginaw:—C. L. Bigelow.

Holland:—H. Kraker, S. Knoll, R. Peel, Peter Bontekoe, P. Damstra and D. Steketee.

Lansing:—Frank Leadley, Theo. S. Shields, Edward Gibbons, Theo. Gross and H. F. Thompson.

Grand Rapids:—Carl Neuman, G. S. Huneman, Wm. A. Decker, T. S. Hunter, F. H. Youngs, R. Vanderweide, Chas. Quain, L. H. Semeyn, Wm. Practorius, W. Cargill, P. N. Harmoner, Frank Slooter, L. J. Butler, Van Rossum Bros., S. Merdzinski, Otto Bettin, Carl Rasch, Wm. Metzger, A. A. Muir, M. Proos, H. C. Struths and J. Lang.

Marshall:—S. P. Mater.

Detroit:—John Pruine, C. S. St. Aubin, Buffe Plumbing & Heating Co., Norman Boosey, E. P. Giberson, O. A. Wurm, C. P. Tietze, Chas. Burns and Al. Hemple.

Reed City:—C. E. Wheeler.

Jackson:—E. R. Link, Rettner Pickles and James J. Keeley.

Flint:—Herbert H. Newitt, Edwin Sterner, Joseph Miller, John Miller, C. Knapp, Geo. Holmes, Wm. Church, Tony Van Deusen, Frank Gardner, G. M. C. Shaw, T. J. Henderson, Paul Ream and N. Agree.

The Outing On Wednesday.

On Wednesday the delegates spent the day at Pine Island Lake, a picturesque picnic ground, which adjoins the farm of the late Stanley Ketchell, former world's welterweight champion. Delegates and guests of the association made the trip to the picnic in automobiles, leaving Grand Rapids at 9:00 a. m. The entertainment committee of the Grand Rapids association had provided various features of interest and comfort for the picnickers. A brass band rendered patriotic airs during the day. Baseball, foot races and fishing were forms of outdoor sport which some of the delegates indulged in. One of the star numbers on the picnic program was the snake dance by Carl Rasch, of the Grand Rapids local. In order to put "pep" into the dance, Mr. Rasch captured a water snake on the shore of the lake. Holding the reptile by the neck he performed very creditably and to the delight of all the boys. Refreshments were served during the day, and particularly appetizing was the dinner which was served in the large tent.

BUSINESS VENTURES AND CHANGES

Elko, Nev.—Irving & McWade have discontinued their plumbing business in this town.

Fallon, Nev.—J. P. Doyle has purchased his partner's interest in the plumbing firm of Doyle & Hendricks.

Ferndale, Wash.—J. L. Smith has discontinued his plumbing business at this place. His future plans have not yet been announced.

Newark, N. J.—The W. H. Drummond Co., of 60 Lafayette Street, has been incorporated with a capital of $25,000, to conduct a plumbing business.

Toledo, O.—The Densmore Plumbing & Heating Co. has been incorporated with a capital of $10,000. James D. Densmore is at the head of the new company.

New York, N. Y.—Acme Heating & Plumbing Co. has been incorporated with a capital of $2,000. The incorporators are Isadore Dolisky and C. Goldberg.

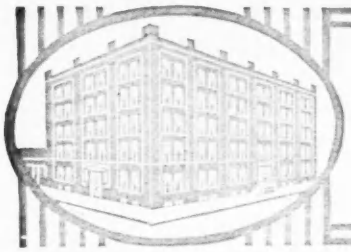
Boulder, Colo.—Albert J. Kelling has purchased the business of the Modern Plumbing & Heating Co., in this city. The transfer took place June 1st. Mr. Kelling has been manager of the plumbing department of the Charles Hoffman Co., Mansfield, O., for the last two years.

Humane.

A man traveling on horseback came upon an Irishman who was fencing in a most barren and desolate piece of land.

"What are you fencing in that lot for, Pat?" said he. "A herd of cows would starve to death on that land."

"Faith, it's thrue for ye," was Pat's reply, "and shure I'm fencing it to keep the poor bastes out of it."—Exchange.



Among the Wholesalers and Manufacturers

COMPANIES RECENTLY INCORPORATED.

The Neiman Heater Co., of New York City, has been incorporated with a capital of $10,000, to manufacture heating boilers. The incorporators are Alvin B. Neiman, Hugh Wabst and Alfred Nutt.

Hart Mfg. Co., of Louisville, Ky., has been incorporated with a capital of $60,000, to manufacture heating specialties and drinking fountains. The incorporators are T. W. Vinson, H. K. Kole and R. E. Gordon, all of Louisville.

The Schueler Ventilator Co., of Bloomington, Ill., has been incorporated with a capital of $25,000, to manufacture ventilating systems. The incorporators are Frederick, Edwin R. and Oscar H. Schueler.

The Bunting Boiler Co., of Chicago, has been incorporated with a capital of $300,000, to manufacture boilers and heating specialties. The incorporators are J. T. Bunting, J. G. Burns and C. W. Shaeffer.

CAMDEN BRANCH OF CRANE CO. IN NEW BUILDING.

Crane Co. has just moved into its new store and warehouse at Second and Federal Streets, in Camden, N. J.

MOVES BROOKLYN WAREHOUSE.

John Wood Mfg. Co., of Conshohoken, Pa., has moved its Brooklyn warehouse and office from 87 Thirty-fourth Street to larger quarters at 67 Thirty-fifth Street, Building 5 of Bush Terminal.

THE AHRENS & OTT MFG. CO. BUYS FOWLE & SON'S SUPPLY BUSINESS.

The Ahrens & Ott Mfg. Co. has just announced that it has acquired the plumbing and heating supply business of Fowle & Son at 95 West Water Street, Milwaukee, Wis. The business will be continued as a branch of the Chicago house of Ahrens & Ott Mfg. Co., and it will be under the immediate charge of H. N. Haynes, as manager of the Milwaukee branch.

ENCOURAGES THE PURCHASE OF LIBERTY BONDS AMONG ITS EMPLOYES.

The Northern Brass Mfg. Co., of Waukegan, Ill., is showing its patriotism in a most practical way and one which deserves emulation, as the following letter to its employes proves: "Money is needed to fight this war. Your government needs the help of your money. The United States government will pay you 3½ per cent for its use. Are you willing to save a small amount each week and invest in United States government Liberty Bonds? We will buy the bonds for you and let you pay for them a little each week. When you have paid in full for the bonds, they will be delivered to you. This is a chance to show your patriotism. Should any employe be called to the ranks this company will continue his payments until bond is paid, then turn it over to him, or his order, without any obligation or expense to him."

THE SECOND TOURNAMENT OF THE N. E. M. P. GOLF ASSOCIATION.

The New England Metal Products Golf Association held its second meeting recently at the Woodland Golf Club, Auburndale, near Boston. There was a large attendance, as the weather was ideal for golf, and the event proved most enjoyable. The members present were: W. H. Thayer, W. P. Hosmer, G. F. Uhler, R. E. Sargent, E. T. Foote, W. H. Hunter, J. Stevens, R. Kirby, John S. Nicholl, John A. Trott, W. J. Eddy, D. W. Wade, H. L. Doten, E. C. Townsend, E. T. Davis, B. F. McMahon, and G. H. Bell.

In the morning the first prize went to Mr. Thayer, with a score of 86 gross, less handicap, 6 = 80 net. The second prize in the morning went to Mr. Hunter, 89 less 5 = 84. In the afternoon the first prize went to Mr. Kirby, 105—30 = 75 net. The second prize went to Mr. Nicholl, 99—20 = 79 net.

WESTERN TRADE GOLF ASSOCIATION'S FIRST 1917 TOURNAMENT.

The first 1917 tournament of the Western Trade Golf Association was held at the Wheaton Golf Club, Wheaton, Ill., on Tuesday, June 5th, with a good attendance.

A qualifying round was played in the morning but in the afternoon rain made it impossible to complete the tournament.

All prize money was donated to the American Red Cross and Red Cross medals were presented to the following players who were winners or runner-ups in their respective flights at the time the game was called: D. E. McCabe, A. S. Lindeblad, J. P. Dugger, Paul Blatchford, T. N. Johnson, J. F. Tuttle, R. M. Stackhouse, C. A. Morrow, C. H. Bishop, W. Wickersham, E. L. Dawes, Charles Stringer, S. Z. Wright and J. A. Murphy.

The following players participated in the event: E. W. Sanborn, D. E. McCabe, W. A. Cameron, R. L. Taylor, F. Corcoran, E. J. Claffey, B. M. Sharp, A. S. Lindeblad, J. P. Dugger, Paul Blatchford, T. N. Johnson, J. F. Tuttle, R. M. Stackhouse, F. M. Minninger, H. M. Sedgwick, F. P. Keeney, C. A. Morrow, C. H. Bishop, W. Wickersham, Peter Munn, E. L. Dawes, I. D. Glanz, H. E. Keeler, C. C. Stringer, S. Z. Wright and J. A. Murphy.

After the dinner was served at the Club House, President Sanborn announced the presentation of cups to the Association by J. M. Heatherton, George Hoffman and F. P. Keeney, to be played for and presented at the end of the season.

Following this, the annual meeting of the Association was held. The reports of the president, treasurer and secretary indicated that the Association had increased its membership in a most gratifying manner during the past

year and that it is in an exceptionally good financial condition.

A motion was made and carried to invest $100 of the Association's money in a Liberty Bond to be played for during the year, as designated by the officers, in lieu of the customary cup.

The following officers were thereupon elected for the ensuing year: President, E. W. Sanborn; vice-president, C. D. Little; treasurer, C. S. Pitkin; secretary, F. P. Keeney; captain, Paul Blatchford; handicapper, J. P. Dugger. These officers with H. E. Keeler and Ray M. Stackhouse will serve as directors of the Association.

The following gentlemen were elected to membership in the Association: L. J. Elliott and W. J. O'Day, of James B. Clow & Sons; B. F. Corcoran, of the Hoffman Specialty Co.; B. M. Sharp, of the La Belle Iron Works, and W. M. Scudder, of the American Radiator Co.

The Association's next tournament will be held on the course of the Westward Ho Golf Club on Tuesday, June 26th.

PRESIDENT G. R. ADAMS ON MARKET CONDITIONS IN THE SUPPLY TRADE.

In the current number of the Bulletin of the Eastern Supply Association, President Guilford R. Adams, of Rochester, N. Y., comments in a terse manner on present market conditions in the plumbing supply trade. His comments follow herewith in part:

"To Sell or Not to Sell."

Never in the history of the plumbing supply business has the problem "To sell or not to sell" been as great as at this present moment. This is true because conditions never before met are confronting us almost over night. As a concrete example, the matter of the government's order for one hundred thousand washdowns and tanks for sanitary equipment of the Training Camps will tax the capacity of the potteries of our country for the next two to three months, and jobbers' orders for these particular goods *will not be filled during that period.*

As loyal citizens, we cannot complain, for the health of our soldier boys must be conserved. As brother jobbers we should help one another out in this emergency, at a very low profit to ourselves.

Who can tell what will be the next line of goods that our government will need or what source of supply will be closed to us for weeks or months?

We hear much these days regarding conservation of our food supply. Men high in authority would not be sending out these warnings if they were not in possession of facts and figures not known to the masses. Should we not, as plumbing supply jobbers, conserve our stocks and be ready to sell a fair share to the government, if need be, rather than raid one another's markets, selling at prices below the cost to replace?

This is inspired by a letter just received from Secretary Hanley, enclosing a letter from Vice-President Joseph F. Evans, of which the following is a copy:

"Replying to your inquiry of the 22d inst., regarding worthy and practical suggestions for discussion at our June Meeting, will say that, in my estimation, there was never a more opportune moment for the E. S. A. to prove its fitness to exist as an Organization of merit than right now. What must we do, you might ask? We must, by intelligent speech, demonstrate to the jobbers of the East that the present market values are real and in this way prevent the calamity that is bound to follow a continuance of merchandising methods, which are being practiced at present, because the preponderance of our members foolishly think that present market values are fictitious. The manufacturers are doing their full duty in this matter on present orders, because they are each day confronting new problems, such as lack of efficiency in help—high cost of raw materials—lack of shipping facilities—reduction in tonnage, etc., while the jobbers, on the other hand, are out of touch with these facts, and are only cognizant of the poor business conditions in their territorial zone. This, in my estimation, is the time we must apply the brakes of caution to our ambition for big business, and resolutely maintain present market values. In this way, we could wisely exchange lack of volume for large profits on material previously purchased and at the inventory period, show a splendid balance on the right side of the ledger. A sound talk along these lines by our President would be very appropriate and much appreciated, I am sure."

Can we, in any better way, show our appreciation of the loyalty of our Vice-President, Archie M. Maddock, in his new task as Chairman of a Special Committee of Plumbing Supplies, in the work of providing sanitary equipment for the United States camps, than by conserving our stocks so that we may aid him as well as our government, if necessary? We all know that Archie has accepted this position at a personal sacrifice. Why not do our part and conserve our stocks for any emergency?

We look forward to a record-breaking attendance at the June 20th meeting at Hotel Astor, New York City, for we are making history every day, and such a conference between jobbers and manufacturers cannot but give us vision to help to build our business up.

* * *

President Adams on the Purchase of Liberty Bonds.

In another article in the Bulletin, President Adams writes: "It is our patriotic duty to buy Liberty Bonds. Others will give their lives, we can at least give the use of money."

PRICES ON PLUMBING GOODS GOING UP.

Referring to the "Comments on Market Conditions," by C. V. Kellogg, president of the Kellogg-Mackay Co., of Chicago, published in these columns some time ago, a leading master plumber in one of the western cities writes as follows:

"It is doubtful if very many of the plumbers and fitters throughout the country realize the advances in the cost of materials which have taken place during the past two years. Many comparisons have been made showing that some lines have advanced 60 per cent or 70 per cent or perhaps many times that. But percentages are deceptive, actual figures are needed to bring home conclusively the true facts.

"I can well understand how, for a certain portion of the past two years, some of the craftsmen have been using materials purchased prior to the advances, but it is almost certain that at the present writing there is very little material now in stock, which was purchased at the old time low prices. Even so, good business methods make it imperative that present day sales be based upon present day costs. The business man, who purchased before the advances, has earned that profit and should keep it. When the market goes back to normal again, there will be a loss on whatever materials are then in stock. The profit on the advance must be used to offset the loss on the decline.

"To say the least, discounts are deceptive. The difference between a discount of 80-10 and 60-10 does not at first glance strike a person as being of very great consequence, but a little figuring will show that there is a difference of 100 per cent. In other words, a 2 by 6 black nipple listed at 38 cents, less 80-10, nets .068; the same nipple at 60-10, nets .137, a little more than twice as much.

"A comparison of actual costs based on the prevailing

discounts in May, 1915, May, 1916, and May, 1917, will soon convince the most skeptical that the price elevator has gone up. Some fortunate masters rode up in the elevator, but many of us will have to use the stairs.

"The resulting prices have brought about a new condition. A few short years ago, 30-gallon hot water boilers were purchased for less than $4 each and the usual selling price was from $8 to $10. The margin was never less than 100 per cent.

"Now we have a cost of $12 and a resale price of from $15 to $18; and I have yet to hear of anyone adding 100 per cent and getting $24 for a 30-gallon boiler. The prevailing price is probably $15.

"Result, a $3 profit on a $15 sale or 20 per cent on the selling price or 25 per cent on the cost price. Formerly, it was 50 per cent on the selling price and 100 per cent on the cost price.

"The new conditions bring us face to face with two issues. First, to increase the volume of sales so that notwithstanding the closer margin of profit the net profits will be the same and this will, of course, require more capital; or, in the second place, do a smaller business and reduce the overhead accordingly. The majority of the men in the trade would do well to follow the latter course.

"Volumes have been written about overhead costs and cost accounting. We must bring these forces to the front so that the large sales volume brought about by the high prices will not deceive the masters into the belief that their profits are in accordance with their sales. In theory, the larger the sales the larger the profits, but I am very much of the opinion that this does not hold good with plumbing and heating men. We may be quick to cut prices, but we are mighty slow when it comes to boosting them.

"Briefly, if you were doing a $10,000 business at 40 per cent, you had a gross profit of $4,000. Working on a 20 per cent basis, it will be necessary to either do a $20,000 business or else cut the overhead costs to fit the business.

"Under present conditions, it may in some cases be possible to increase the volume, but 99 out of every 100 plumbers will find this impossible; accordingly, we must all figure on doing a smaller volume of business, and we must cut the overhead accordingly or else have the sheriff put his padlock on the door.

"The master plumber and fitter must get out his pencil and paper and figure out actual costs on the many articles which he uses; percentages are merely guides, actual figures are the things that count. Better yet, subscribe to a good reliable price guide. It will pay for itself in one week if you will use it, and if you are going to be right with yourself and your family you will use it in every transaction you make.

"Don't use your memory for prices, use it to locate the proper cost sheets in your price guide."

THE PROBLEM OF AUTOMOBILES FOR PLUMBING SUPPLY SALESMEN.

The Central Supply Association recently issued a bulletin asking its members for information in reference to automobiles for salesmen.

In reply to this bulletin a great number of valuable answers were received, from which we have culled the following, which will no doubt be of interest to many of our readers:

1. "In response to your bulletin of the 19th, in the matter of salesmen's automobiles, our experience is that it is decidedly best to keep just as far away from any responsibility incident to the same as is possible; consequently, we stop at an allowance, which makes the dividing line a very definite one."

2. "We note the question raised about the salesmen's automobiles. Our practice has been to permit the salesmen to buy their own machines and operate them by a flat allowance per month for the expense, and the arrangement has been very satisfactory. We regard this plan as better than owning the machine, for the reason that the salesman is usually out only five days and generally uses the machine for his own and his family's convenience during the remaining two days. In this way the company is, in a measure, relieved from the expense of operating the car during these two days."

3. "We are very much interested in that portion of your bulletin of the 19th inst. headed 'Salesmen's Automobiles.' We ourselves have investigated to a limited extent the plans in force with some institutions, but we would like to gather as much information as possible. We at the present time have one salesman in our employ who operates his own machine, he having purchased it only about four or five weeks ago. He is using the machine in making his calls, for which we are allowing him $1.25 per day. Of course, this plan has not been in operation for a sufficient length of time to ascertain whether or not it is mutually satisfactory."

4. "Replying to your bulletin of the 19th, re automobiles, we insist that our men own their own machines, although we have, as a rule, to help to finance the proposition. We want them to have the care and responsibility of them. We allow them $7.50 a week for their use."

5. "Our method, with four Ford autos, is to buy the cars and to pay the actual expense of running them. We do not consider this an entirely satisfactory or successful method, but it has one distinct advantage, namely, that the cars can be distributed around among the different salesmen as the occasion arises, and such occasions do arise quite frequently."

6. "Our salesmen own their machines and we make them an allowance of $30.00 per week for expenses."

7. "We have several machines in use by our salesmen, and practice has been to buy the automobiles and pay the actual expenses in connection with their operation. We would be interested in knowing the results of your inquiries along this line."

8. "Complying with your request in bulletin of the 19th inst., in reference to the above matter, wish to advise that two of our city representatives use automobiles in calling on the trade. The automobiles, however, are owned by us and we stand all expenses in connection with same."

9. "In compliance with your request for information regarding the manner in which we handle salesmen's automobiles, would state for your information that our city salesman purchased a Ford car and we allow him a flat rate of $3.00 per week to cover the cost of maintenance."

10. "We have bought autos and turned them over to salesmen for business uses. Some of our men have bought autos themselves and used them part of the time for business purposes, but we have never worked out any plan whereby we could adjust the expense in a way that would be entirely satisfactory, and we could say that the correct proportion of expense was placed where the burden should be borne.

"The salesman who has the auto turned over to him as store equipment uses it for personal as well as business purposes, and thus expense is added outside of legitimate selling expense.

"With the salesman owning his own auto, if he charges a flat rate per mile, it may not cover his actual cost, as

depreciation and upkeep are difficult items to proportion, and he is apt to find himself saddled with a loss in the operating expense.

"When a flat rate per week is allowed the salesman (unless he has constant use for an auto), there is a chance of the employer paying for auto service when the auto is not in actual use.

"In taking on a proposition of this kind, it is advisable to consider well the need, the territory to be covered, the salesman, and the profits necessary to cover the additional expense."

WHY ADVERTISING RATES ARE HIGHER.

The manufacturers, who advertise in newspapers, trade publications and magazines of general circulation, may be interested in some facts brought out in the hearing before the United States Senate Commission on Finance relative to the proposed increased rate on second class matter. That publishers have been compelled to increase both their advertising and subscription rates is self-evident and it is doubtful as to whether many of them will be able to continue publication. Eighty-six national periodicals submitted statements showing that the increased cost of paper to be used by them in 1917 over the cost in 1916 will amount to $3,034,566.83 as against the total combined net profits of these publications for the year 1916 of $1,197,403.73.

Mr. Louis Wiley, business manager of the New York Times, submitted the increased cost of paper for the "Times" as $900,000 per year, which is far in excess of the profits of the New York Times in its most successful year.

Under the proposed zone system for second class mail matter passed by the House and now under consideration by the Senate Finance Commission, the mail rate on second class matter will be raised from 1c per pound to the equivalent of 3.43c per pound. A statement submitted by eighty-six publications of general circulation, compiled by the auditing firm of Price, Waterhouse & Co., of New York, showed an increased postage expense to those publications of $5,553,073.16, while their combined net profits during 1916 were $1,197,403.73.

Fifty-five farm papers showed by an audited statement an increased postage expense of $2,930,559.05, while their aggregate net profits in 1916 only aggregated $581,875.20. A trade paper published in New York City with an average net profit for the last four years of $7,000.00 will be compelled to pay an increased postage expense of $35,000 per year.

All of which tends to confirm the accuracy of the late General Sherman's observation regarding war.

G. M. Snyder, sales manager of the National Sanitary Mfg. Co., of Salem, O., has just returned to his duties after having spent thirty days in Los Angeles, Cal., where he was called by the illness of his mother.

R. D. Knight, of 766 Drexel Building, Philadelphia, who is representing the Knott Mfg. Co., of Tell City, Ind., in Pennsylvania, New York, Maryland and New Jersey, has just been assigned New York City and suburbs as additional territory.

Lou Brennan, president of the Victor Brass Mfg. Co., of Cleveland, O., is spending a few days among his friends in Chicago.

Charles A. Morrow, of the Chicago branch of A. M. Byers Co., of Pittsburgh, Pa., has just enlisted in the United States Aviation Corps. He is a member of the Western Trade Golf Association.

O. H. Slaughter will hereafter cover Georgia, South Carolina and Florida, as representative for the Knott Mfg. Co., of Tell City, Ind. He will make his headquarters at Jacksonville, Fla.

H. S. Wainwright, well known in the Pacific Coast trade, has been appointed sales representative of the Hercules Chemical Co., of New York. He will cover the entire Pacific Coast.

E. B. Lane, of the sales force of the Thomas Maddock's Sons Co., of Trenton, N. J., has enlisted in the New Jersey National Guard. He has been assigned to the Quartermaster's Department.

Francis A. Hadley has opened offices at 1480 Broadway, New York City, as manufacturers' agent for a number of manufacturers in the boiler, radiation, and heating specialty lines. Mr. Hadley is well known in the heating trade, having been assistant manager and later manager of the New York office of the U. S. Radiator Co., covering a period of nine years, and lately manager of Hart & Crouse Co., Utica, N. Y.

The Trenton Potteries Co., of Trenton, N. J., will be well represented in the United States Army, not less than eight of its men having offered their services to the country, as follows: John F. McCullough, assistant to A. K. Aitkin, advertising manager; James W. Devine, assistant to Traffic Manager Hoffman; Spencer Bloor, sanitary presser, and W. R. Clark, clerk. These men have joined the engineering corps, Company C, Second Regiment, National Guard, of New Jersey, as privates. Charles Meyers has enlisted as a cavalryman, and has been assigned to Fort Sam Houston; Jonas Mutchler has also enlisted as a cavalryman, but has not yet been assigned. John B. Flattery has been assigned to Fort Slocum, while James Gilford has enlisted in the Medical Reserve Corps, Hospital Base 34.

Fishermen and "near" fishermen from various parts of the country cast business cares to the winds and reeled off the miles that brought them to Turkeyfoot Lake, O., on Friday, June 1. This big fishing event of the season was staged at "Green Gables," the summer abode of J. T. Catlin, manager of the plumbing supply department of the Hardware & Supply Co., of Akron, O. Green Gables is located in the heart of the most beautiful lake region in northern Ohio, some fourteen miles from Akron. Mr. Catlin had overlooked nothing that would add to the pleasure and comfort of his guests, from the importing of a French chef to the selection of correct tackle to entice the elusive bass. The details as to the number of fish caught and their weights have been omitted by the censor, but this information will no doubt be given out for months to come by the enthusiastic guests whose names follow herewith: F. F. Bulkeley of the Bishop-Babcock-Becker Co., Cleveland, O.; J. Frederick Coxon, of the Wooster Sanitary Mfg. Co., Fredericksburg, O.; G. J. Goergen, of the Frost Mfg. Co., Kenosha, Wis.; G. A. Robertshaw and R. J. Foley, of the Robertshaw Mfg. Co., Youngwood, Pa.; Fred H. Steffins, of the Hardware & Supply Co., Akron, O.; Frank G. Newton, of the United States Sanitary Mfg. Co., Pittsburgh, Pa.; H. J. Hart, of the Speakman Supply & Pipe Co., of Wilmington, Del.; J. J. Moinet, A. Jensen, M. J. Kelley and J. W. Williams, of Ravenna, O., and J. J. Hendersen, of Cleveland, O.

The Metal Market

Steel and Iron.

The steel rolling mills of the entire country are working to capacity but that capacity is limited by certain unfortunate factors, chief of which is the shortage of labor. There are not enough skilled and semi-finished hands to do the work, and there is competition bidding for men among manufacturers. Fuel is also in short supply and is now growing expensive. The movement of ore has been hindered to a serious extent by lack of adequate transportation facilities. Car shortage is so serious that the roads are adopting novel means to alleviate it. Some Western railroads are withdrawing solicitors and are instructing them to call upon consignees and urge them to unload the cars they happen to be holding as rapidly as possible. This plan is working out well and has resulted in a daily release of many cars, which would otherwise have been held up indefinitely. Foreign business is accumulating in large proportions. Contracts for 10,000 small-sized box cars were placed with American builders by the Russian government, and negotiations are under way for several thousand 40-ton box and 50-ton coal cars, as well as for about 500 locomotives. Locomotive orders during May, for domestic and foreign account, amounted to 1,349, which is the greatest number ever entered in one month. Freight car orders amounted to 15,494 during the same month, while rail orders amounted to 110,000. But it is the ship building activities of the government which are holding back the steel needed for railroad, structural and manufacturing work. Fabricating shops complain that they cannot accept new business because of the difficulty in obtaining the requisite material. The steel makers and the foundry men are agitated over the question as to how much higher the price of iron is going. Consumers think that the price is dangerously high now, and that if it keeps on advancing the result will be a curtailment in its use. Already it is announced that the manufacturer of automobiles are going to curtail production, and no doubt many other iron consuming interests will follow suit. As with steel, the iron producers are short of sufficient labor, fuel and transportation which curbs production, but the output was never greater than it is today, and at the same time never fell so short of meeting market requirements. As a result of buying pressure from all directions there were several advances last week. Quotations are as follows:

No. 2 X Northern foundry, New York	$45.75 to $46.25
No. 2 X Northern foundry, Buffalo	43.00 to 45.00
No. 2 X Southern foundry, Birmingham	40.00 to 41.00
No. 2 X Southern foundry, Cincinnati	42.90 to 43.90
No. 2 Southern Ohio Coke, Cincinnati	41.00 to 42.00
No. 2 X Northern foundry, Chicago	45.00 to 46.00

Copper.

The price of copper is gradually advancing despite indifference on the part of domestic consumers. There is no copper offering by first hands nearer than August, and the earlier positions are held by smaller distributors at prices which vary according to seller and the quantity ordered. Spot copper ranges all the way from 32 cents to 34 cents. The entire tone of the market indicates little chance of a decline especially as the market is well sold up.

Tin.

The tin market is slowly subsiding and spot metal closed the week at 62⅞ cents as compared with 64¾ cents a week ago. For Straits tin futures were entirely neglected, and no prices were made which would determine a definite value for Eastern shipments. Spot tin was dull throughout the week because of the weakening market. Arrivals have been fairly liberal and buyers prefer to wait in hope of uncovering a further weakness.

Lead.

Lead advanced about one-half cent a pound last week owing to scarcity of the metal and was held at the end of the week at 11¾ cents for spot. The leading producers intimate that they may have lead to offer within the next two or three weeks because of increased production expected during June and July.

Spelter.

There has been little interest in spelter for some time. Ore is high and the market must continue firm in consequence. Prices are 9¼ cents, spot New York and 9⅜ cents St. Louis.

Old Metals.

Selling prices for old metals are quoted as follows:

Copper, heavy cut and crucible	30¾ cents
Copper, heavy and wire	29¾ cents
Brass, heavy	18½ cents
Brass, light	15¼ cents
Lead, heavy	9⅞ cents
Tea lead	8¾ cents
Zinc scrap	7⅝ cents

THE PIPE SITUATION.

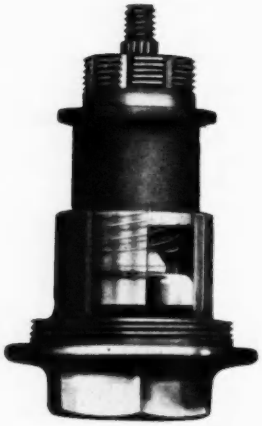
While there have been no changes in prices since the last card was sent out on May 15th, the situation is, however, serious. The demands by industrials and oil country have been so great that it has been absolutely impossible to respond with any degree of promptness, especially on lap-weld sizes.

Commitments have been so great that it will be well into the year 1918 before final deliveries on orders already placed can be made. While the situation is not so serious as regards butt-weld sizes, deliveries cannot be expected for from six to twelve weeks after orders are placed.

The agricultural districts do not appreciate this condition, but they should be informed so that they can anticipate their requirements for at least ninety days.

The situation is further aggravated by Government requirements, which of course must be given precedence over the regular trade. These demands will be very heavy when locations are settled for cantonments. There will be about sixteen of these cantonments, which will accommodate units of 30,000 men, covering a territory of about 800 acres. These cantonments will have to be provided with pipe necessary for water, sewerage and heating facilities and are expected to be ready in the early fall to provide for large armies.

While there have been additions in equipment in a number of steel plants, it will not be possible to manufacture more steel than is represented by the ores delivered to the various plants. On account of the delay in opening navigation there was a shortage of 4,000,000 tons over the spring of 1916. As the facilities for transportation are no greater at this time, it is evident that there will be no increase in finished products over the year 1916, and unless the Great Lakes are open late in the fall there will be less than last year, all of which goes to indicate that the mills cannot take care of a greater tonnage than is represented by normal requirements.



Modulating O

The Haynes Valve is ¾" Jenkins Disc with double adjustment.

First:—It can be accurately and permanently adjusted after being attached to radiator (without removing any parts), to admit just the amount of vapor to fill any size radiator, from five to two hundred square feet at varying pressure, or distance from source of supply.

Second:—Valve opens and closes with a three-quarter turn of handle, the Jenkins Disc sliding up and down admitting or shutting off of vapor necessary to heat a fractional part or all of the radiator at will.

To permanently adjust valve after attaching to radiator, turn handle to "Off," slightly loosen nut "C," then turn handle of valve to left, which will turn dial plate to left, decreasing capacity 10 ft. for each mark. The marks exposed to sight will indicate:

I—10 Ft. of radiation,
II—20 Ft. of radiation,
III—30 Ft. of radiation,

and so on for any size radiator.

If in actual practice too much or too little vapor is being supplied on account of varying pressure or distance of that particular radiator from boiler, the valve can be reset to meet the particular conditions. When valve is correctly set, tighten the lock nut "C" tight.

When radiator is in use, any part of same can be heated by turning indicator handle from one to ten.

Haynes Selling Company,

Vapor Heating Specialties

Haynes Specialties excel in efficiency and quality

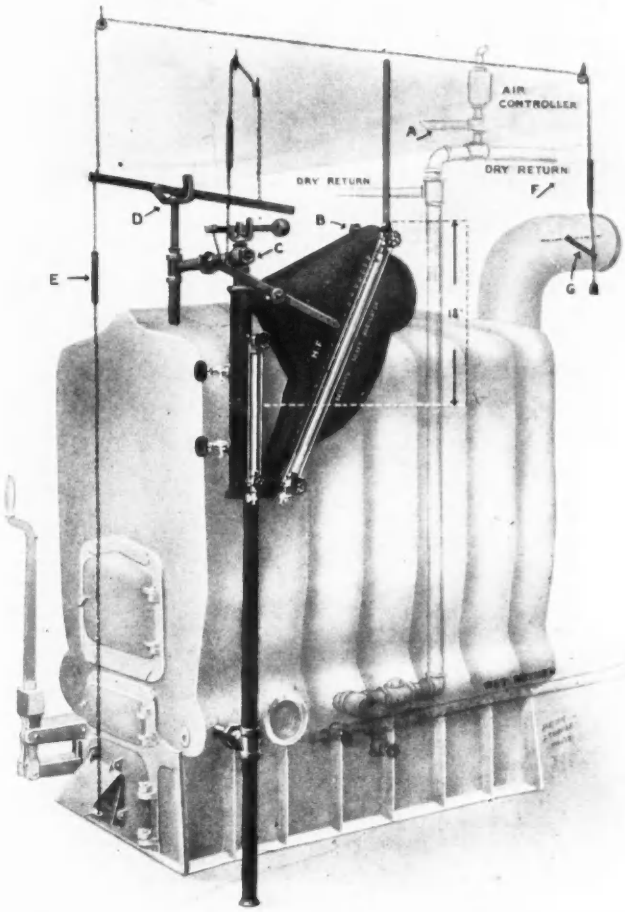
The H. & F. Regulator as attached to Boiler

Set regulator so water line is at water line of boiler

Connect chains and pulleys as shown

Oval damper 1½ times diameter of pipe

Prices and information on application

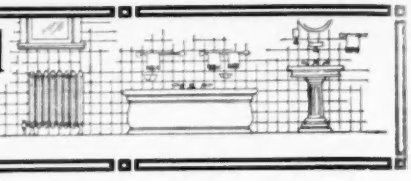


Over Twenty Years' ***Experience*** develops ***Knowledge***

Experience and ***Knowledge*** produce ***Quality***

, Philadelphia, Pennsylvania

Among the Plumbing and Heating Contractors



Illinois

Chicago and Vicinity.

The Board of Examiners of Plumbers has recently issued master's certificates to the following applicants, who have successfully passed the required examination: Samuel Morris, 1510 North Maplewood Avenue; Guy J. MacGregor, 5021 Washington Avenue, and Louis Strauss, 3264 Groveland Avenue.

The A. C. Flynn Heating Co., of 718 West Sixty-third Street, has secured the heating contract for an eighteen-apartment and office building, which is to be erected, at a cost of $80,000, at 7400-12 Vincennes Avenue. The architect is Carl W. Westerlind, 111 West Washington Street.

A. A. Allardyce, of 1433 Foster Avenue, will install the plumbing in a three-family building, to be constructed at 1451 Berwyn Avenue.

L. Nelson, of 3521 Fullerton Avenue, has been awarded the contract for installing plumbing in five residences to be erected at a cost of $4,000 each.

Pronger Bros., of 282 Western Avenue, has recently been awarded the contract for installing the plumbing in connection with a swimming pool to be built, at a cost of $13,500, in Central Park, Blue Island.

Thomas Donlan, of 1036 West Sixty-ninth Street, will install the plumbing in a six-family apartment building to be erected, at a cost of $20,000, at 6604-6606 Champlain Avenue.

H. P. Reger & Co., of 54 West Randolph Street, have secured the heating and plumbing contract for a store building at the southwest corner of State and Lake Streets, which is to be remodeled at a cost of $15,000.

A. Dappmann, of 5454 Broadway, will install the plumbing in three stores at 1950-56 North Avenue, which will be remodeled at a cost of $10,000.

Ben Rigby, of 545 West Lake Street, has recently been awarded the contract for installing a steam heating system in a flat building and garage to be erected, at a cost of $20,000, at 6625-7 Glenwood Avenue.

The M. J. Corboy Co., of 178 West Randolph Street, has secured the contract for the installation of the plumbing in a telephone office building to be erected, at a cost of $1,800,000, at 311-27 West Washington Street. The architects are Hollabird & Roche, 104 South Michigan Avenue. The Corboy company also has the plumbing contract for an eighty-room addition to a hospital, to be erected at a cost of $100,000, at 1044 North Francisco Avenue.

Schampell & Dougherty, of 173 West Washington Street, have been awarded the contract for the installation of a heating system in an apartment building of 180 flats, to be erected at a cost of $100,000, at the corner of Pine Grove Avenue and Surf Street. The architect is H. R. Wilson, of 11 South La Salle Street.

J. J. Daly, of 408 Wells Street, will install the plumbing in a baking plant to be erected, at a cost of $200,000, at Diversey and Lincoln Avenues.

The American Heating & Plumbing Corporation, of 54 West Randolph Street, has secured the contract for installing the plumbing system in an addition to a packing plant to be constructed, at a cost of $40,000, at 2222-24 South La Salle Street.

Charles C. Breyer, of 1545 West Division Street, will install the plumbing in an addition to a pool room, which will be constructed at a cost of $8,000, at 5540-42 Broadway. The heating system will be installed by George A. Heinrich, of 5650 Broadway.

That there is no lack of patriotism in the local plumbing craft is evidenced in the dressing of the display windows of many establishments in the city. The accompanying picture is an example. The flag and liberty bond posters are given a conspicuous place. The window is that of the plumbing firm of Hulbert & Dorsey, at 202 West Lake Street.

The Show Window of Hulbert & Dorsey, at 202 West Lake Street, Chicago.

J. J. Wade, Sr., one of the nestors in the plumbing trade in Chicago, has been confined to his home for some time. It is expected that his health will soon be improved to the extent that he may return to his desk.

Hobart Haviland, son of Secretary W. C. Haviland, of the Illinois Master Plumbers' Association, has enlisted in the ambulance corps organized by the students of Northwestern University. There are sixty members in the corps, which will probably leave for the battlefields of France within a few weeks.

Other Cities in the State.

The Standard Heating & Plumbing Co., of East St. Louis, will install the plumbing and heating systems in a moving picture theater, to be erected at a cost of $11,787, at Main and Broadway Streets, in that city.

John O'Neill & Sons, of 208 Main Street, Peoria, have been awarded the contract for installing the plumbing in a bank in that city, to be built at a cost of $20,000.

Daily & O'Brien, of Peoria, will install the plumbing and heating systems in a tuberculosis sanitarium in that city, to be built at a cost of $35,000.

W. A. Robbins, of Elmhurst, has been awarded the contract for the installation of plumbing and heating systems in four bungalows to be built at a cost of $6,000 each.

Iowa

Wilkinson & Russell Plumbing & Heating Co. is the name of a new firm which recently started in business at 720 East Burlington Street, Iowa City. Both partners are well known to the trade in that city, and already have a number of good contracts on their books. They would like to receive catalogues from jobbers and manufacturers of plumbing and heating goods.

A. Stahl, of Grinnell, has recently moved his plumbing and heating business into a new building constructed for his business. He not only has a modern and up-to-the-minute shop, but also has a display room that is a credit to the trade. Among the features of his new place of business is a room with shower bath for the use of his men, and a public comfort and rest rooms for both men and women. Mr. Stahl has a number of good jobs now under construction, among them being the Masonic Temple Building, the new plant of the Grinnell Marble Works and James Skeel's machine shop.

Jay P. Steele, of Des Moines, has the contract to remodel the plumbing and heating in the Hotel Senate in that city.

John H. Peitzman, of Des Moines, has been awarded the contract to install the plumbing and heating systems in the residence of E. F. McClure, soon to be erected in that city.

The Century Heating & Plumbing Co., of 518 West Third Street, Des Moines, has a number of good plumbing and heating contracts on hand, among them being the Harriet Beecher Stowe Public School, and the residence of W. L. White.

G. T. Sherman, of 1509 West Seventh Street, Davenport, has been awarded the contract to install the plumbing in the new residence of A. Nehlsen, soon to be erected at 608 West Fourteenth Street, in that city. He is also installing the plumbing in a store and flat building now under construction at 1019-1025 West Sixth Street in Davenport.

Adolph Kahles, of Davenport, has a number of very good contracts on hand, among them being the plumbing and heating in Davenport Overland Garage, plumbing and heating in the new building to be erected for the Pederson Linograph Co., plumbing and heating in the Standard Oil Co.'s new sub-station, and a number of good residence contracts, including the installation of plumbing in ten dwellings to be erected for the use of the employes of the government arsenal in Davenport.

Washington

Seattle and Vicinity.

It is a conceded fact that a great city's prosperity can, in a large measure, be judged by the amount of building operations, and that Greater Seattle is now enjoying the kind of building prosperity that counts is indicated by the class of buildings now under construction. The first four months of the year shows a total of 2,619 building permits, with an aggregate value of $2,389,550. As to number and value, this is by no means a record for Seattle, but the fact that permits have been issued during that period for 424 detached residences, thirty-two factories of various kinds, two ocean docks, eleven apartment houses, seven public garages, and 479 private garages, show that the building is of the character that goes toward

Big Profit in Selling Home Water Systems

Have you ever sold or installed any modern home water systems?

Do you realize the profit there is in selling this class of goods?

Do you realize that you not only make a big profit on the pump and tank, but also often sell a big bill of pipe and plumbing goods at the same time—besides making your regular profit on the job of installing the entire outfit?

Do you know that before very long practically every country home and farm will be in the market for one of these outfits?

How many prosperous farmers and country dwellers are there in your territory who still depend on hand pumps or windmills? Would you like to have us show you how you can interest every one of these people in letting you install

Leader

Trade Mark

Home Water Systems

Then mail the attached coupon to your plumbing jobber. Don't write unless you can handle country business and handle it right.

But if you are the right man for us, the Leader line and Leader co-operation will add thousands of dollars to your business each year.

This is the most complete line of home water systems on the market. Look into this now if interested.

MAIL THIS COUPON

This Sign Marks Our Dealer's Store

Mail This to Your Jobber

I am interested in selling Leader Home Water Systems and can handle this territory and the inquiries you send me.
Please give me full particulars.

Name .....

Street No. .....

Town .....

State .....

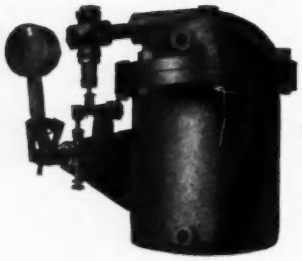
First Aid

for

Faulty Heating Systems

There is a lot of overhauling work on steam heating systems in your town. You can turn this repair work into profitable business and be assured of satisfactory results by installing the

Lytton Thermo Syphon Trap



The Lytton Trap corrects the common faults of steam heating systems, such as water-logged, air-bound conditions and noisy operation.

It is entirely automatic. Removes all air without loss of steam.

Collects the condensation as fast as it forms and discharges direct into boiler regardless of pressure therein.

With the Lytton Trap you are equipped to make any old steam heating system good as new.

We co-operate with the steamfitter. Let us know your heating troubles and we will help to solve them.

Write for Illustrated Bulletin No. 15

Lytton Manufacturing Corporation
Franklin, Virginia

permanent growth and continued prosperity. Another strong indication is that extensions to the public school system in the way of enlarged and new buildings will cost $1,175,000.

The eleven apartment houses under construction will cost $391,300, and are of the most modern type. Plumbing and heating contractors have engaged in spirited bidding on this class of business, as the contracts are all large ones. Apartment house building for the four months of this year show an increase of 56.45 percent over the same period of last year. The residence building shows an increase of 17.32 percent over last year.

Real estate is particularly active at this time, more marked than it has been for years past, due to the remarkable increase in payrolls resulting from the tremendous shipbuilding now under way in Seattle. Increase in construction of small residences is also particularly noticeable, and this field is a profitable one for the plumbing and heating trade.

The immediate platting of a large part of 200 acres of land lying just south of Youngstown, a suburb of Seattle, and the grading of streets and erection of thirty modern homes costing between $1,250 and $1,500 each is planned by the Puget Mill Co. Thirty homes to be built at once will be followed eventually by several hundred similar homes, built to house the thousands of workmen, who are employed in industries located in that section and along the waterfront. Plumbing and heating contractors are looking forward to considerable work from this company during the summer, as the above named structures are only a small part of the construction work planned. W. A. Irwin is local manager of the company.

Architect E. J. Ivey, Boston Building, Seattle, is preparing plans for the construction of a two-story building for the Pacific Telephone & Telegraph Co., at Howard Avenue, near Denny Way. The structure will be 40x120 ft., and equipped with hot water heating and modern plumbing systems.

The Board of Park Commissioners of Seattle, will receive bids until June 18th, for the construction of a comfort station building in Woodland Park, in accordance with plans and specifications on file at the offices of the Board, 533 County-City Building.

Architects Howells & Stokes, Henry Building, Seattle, are preparing for the proposed $8,000 residence to be built at Mt. Baker Park for Dr. Inslee Greene. Separate bids will be taken for plumbing, heating and electric wiring.

Seattle School Board has selected the site for the new high school for the University District, and School Architect Edgar Blair will shortly prepare plans for a structure to cost $350,000 and accommodate 1,000 pupils. The site is 472x637 ft., located at East 66th Street and 15th Avenue, N. E. The latest types of plumbing and heating systems will be installed.

Architect Harlan Thomas, Arcade Building, Seattle, has completed plans for the re-construction of the Moran School for Boys on the site of the original building destroyed last year at Maintou Park, near Seattle. The proposed structure will be 40x115 ft., three stories, of frame construction, with cement plaster exterior. Hot water heating and an elaborate system of plumbing will be installed. F. G. Moran is owner of the school.

Coles Construction Co., L. C. Smith Building, Seattle, is preparing plans for eight five-room residences at Mt., Baker Park. The company will receive bids on sub-contracts.

Architect F. H. Perkins, Lumber Exchange Bldg., Seattle, is receiving bids for the construction of a five-room bungalow in the Seaview Addition of West Seattle, for H.

D. Peterman. Bids for plumbing and heating will be called for later.

Grant Smith & Co., 4th Street and University Avenue, Seattle, have received the contracts for the construction of 400 temporary buildings at Vancouver Barracks, Vancouver, Wash., to house three full war-strength regiments. Plans for the cantonment include water and sewer facilities. A bathhouse will be erected for each company.

Tacoma and Vicinity.

The city of Tacoma bids fair to experience a real building boom this summer. There are now more than fifty houses in the course of construction in the city, and an equal number are planned for early construction. The buildings, costing up to $4,000 are built mainly for homes, although a few are built for rent. There is a heavy demand for homes in Tacoma, due to the marked increase in industrial activity in the city, and it is predicted that building operations will be active during the summer. Contractors, who have been established in business in the city for a long time think that the high cost of building is keeping some people from constructing homes at this time, and they contend that building material is cheaper today than it was 27 years ago. Wages have increased in most lines, plumbing and steamfitting wages having made the biggest advance, about 50 per cent. Plumbing and heating contractors are having a busy season, and a number of large projects will shortly come up for bids.

Bids opened by Pierce County Commissioners at Tacoma, for construction of an addition to the Mountain View Sanitarium, show that F. C. Grosser, 810 South 11th Street, was low for plumbing, at $1,750; and A. Gehri & Co., 1117 South Tacoma Avenue, were low for heating at $1,369.

A. J. Earling, president of the Chicago, Milwaukee & St. Paul Railway Co., announces that plans for the new $300,000 depot to be constructed in Tacoma will be ready for contractors' figures within thirty days.

F. J. Walsh, manager of the Tacoma District Heating Co., Tacoma, has resigned his position, and H. G. Lee, chief engineer of the company, has been named his successor.

Other Cities in the State.

Callahan Bros., North Yakima, will construct a three-story apartment house at North Yakima, to cost $70,000, from plans prepared by Bebb & Gould, architects, Seattle. Bids will be received at once for sub-contracts.

The Chambers Building, Olympia, owned by Frank Griffin, will be remodeled, new plumbing and a new heating plant installed and a brick addition to house the heating plant constructed.

Hans Theil, of Bellingham, has secured the plumbing contract on the Kendall School.

The building permits for Spokane, for the first five months of 1917, exceed the same period in any previous year since 1913. The year's building totals $800,000. The largest permit is that for the new $400,000 Crescent Store to be erected at Main Avenue.

The State Board of Control has approved the plans of Architect Julius Zittel, of Spokane, for the construction of new dormitory and other additions to the Washington School at Medical Lake, to be built by the state at a cost of $80,000, and for the $100,000 school for girls at Grand Mound Wash. As soon as specifications are completed, bids will be called for.

A two-story double house at 2004 Pacific Avenue, Spokane, owned by J. Kellner, will be changed into an apartment house of eight suites. Plumbing will be installed in each apartment. The work of remodeling will cost $9,000.

Eureka

Water Pumps and Systems

help the plumber build up a reputation as well as make larger profits.

Strongly built, so that once installed, they give satisfactory service indefinitely.

Operate quietly, automatically and economically. Absolutely dependable.

Now is the time to go after your share of the pumping equipment business in your locality.

Drop us a card today for Catalog "DW" and full information regarding the "Eureka" Line.

THE BISHOP-BABCOCK-BECKER CO.

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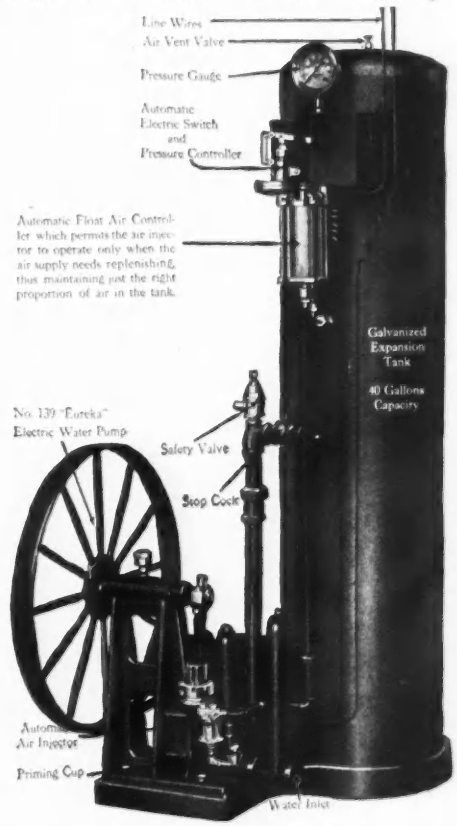


No. 2799 "Eureka" Electric Water System
One of our best sellers.

Shower Heads Shower Heads

No Delay in Shipping

You can get them right off the reel and the price for what you get them will surprise you.

All cast brass with 5 inch removable face, ½ inch iron pipe.

Semi-finished, white plated or polished and nickel plated.

Write for Prices

½ Inch Ball Joints

Semi-finished, white plated or polished and nickel plated.

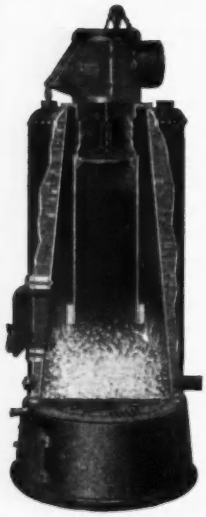
Manufactured by

Street & Kent Mfg. Company

549 Fulton Street

Chicago

The King of Water Heaters



Especially adapted to residences, laundries, barber shops, greenhouses, etc.

So constructed that fire is completely surrounded by water, which means greater heating surface and less fuel consumption.

Vertical movement of water insures perfect circulation.

Self-feeding. Magazine requires refilling but once in twelve hours.

Burns any kind of coal successfully.

Round base with shaking and dumping grates.

All sizes and capacities.

The absence of coils, bolts, flues, packing, sections and cast iron cylinders, eliminates repairs and makes the WILKS positively leaf-proof.

Write for Catalog and Discounts to the trade.

S. Wilks Manufacturing Co.

3517 Shields Avenue Chicago

The Centenary Presbyterian Church, Spokane, will begin work within two weeks on construction of the first unit of its building to cost $20,000. The unit will be of brick, 51x84 ft., and will be equipped with gymnasium, shower baths, toilet rooms, etc.

Oregon

Portland and Vicinity.

G. H. Williams, 904 East 22nd Street, Portland, has secured the contract for construction of a nine-room bungalow, to be built at Bertha Station, for Mrs. E. Herman. Separate bids are desired for the installation of hot water heating and plumbing systems.

The city of Bend is expending more than $100,000 in construction of business buildings and residences. Six permanent business buildings are in course of construction at the present time, and several more are contemplated. Plans have been completed for the Pringle Building, to cost $25,000. A modern heating plant is to be installed in this building.

D. D. Phelps & Son, of Pendleton, have secured the contract for both plumbing and heating in the $20,000 residence to be erected in that city for L. L. Rogers.

Architect Robert F. Tegen, Morgan Building, Portland, will have plans completed about June 15th for the proposed hospital building to be constructed at Salem, Ore., for the Salem Hospital Association, at a cost of $125,000. General contract bids will be asked for, and separate bids for mechanical equipment. The building will be three stories, with main structure 42x166 ft. Separate building will be provided for power plant. It is predicted that every plumbing and heating contractor in Portland and Salem, who can handle such a job, will submit bids.

Finnegan Bros., Portland, received the contract for heating, and J. E. Robertson, of Bend, the contract for plumbing, in the proposed $20,000 Fisher Hotel to be erected at Madras, Ore. The building will be piped with hot and cold water to each room, with public and private baths and shower baths.

The following bids were received for plumbing and heating in the proposed new school building to be erected at Enterprise: Plumbing: W. S. Fleming, Portland, who secured the contract, $2,596; Sturges & Sturges, $2,732; Rushlight & Hastorf, Portland, $2,967; Appling-Griggs Co., Portland, $2,979; Spaeth & Goss, La Grande, Ore., $2,985; E. J. Conkelman, Enterprise, $3,290; A. L. Howard, Portland, $3,446. Heating: Appling-Griggs Co., Portland, **awarded contract,** $6,110; Rushlight & Hastorf, Portland, $6,247; E. J. Conkelman, Enterprise, $6,645; Spaeth & Goss, La Grande, $6,663; Kendall Heating Co., Portland, $7,130; A. L. Howard, Portland, $7,137; W. F. Bunce, Portland, $7,452; George Sutherland Co., Walla Walla, $7,490.

Montana

Richard Lockey, of Helena, will erect the "Yellowstone" apartment, a six-story, L-shaped building, to cost $150,000, at 6th and Allen Streets. Beside the regular kitchenette apartments, there will be bachelor apartments, provided with shower baths. Vacuum cleaning systems will be installed, as well as the latest types of plumbing and heating systems.

Peter G. Glen, Great Falls, will construct an apartment house in that city to cost $100,000, to be three stories, 95x145 ft., and to contain 39 apartments, each equipped with plumbing.

Arnold Evans Co., of Spokane, on its bid of $1,665, received the plumbing contract on the new high school at Libby, Mont.

According to present indications, the city of Dillon will experience a building boom unparalleled in the city's history during the coming summer. Many new residences are to be built, and a number of modern business structures, including a $100,000 hotel, upon which construction has been started.

Idaho

J. F. Murray, Pocatello, has secured the contract for remodelling the present Y. M. C. A. building and constructing a new addition to same, at a cost of $22,000. Subcontracts will be let for plumbing and heating.

Charles F. Baker, of Mackay, announces that Salt Lake and Ogden financiers will erect a three-story modern hotel on Main and Custer Streets in that city. Construction work will begin about July 1st.

The contract for plumbing and heating in the Lewiston Orchards School, at Lewiston, was awarded to Charles Hahn, of that city. The contract amounts to $2,024.

The Peterson Plumbing & Heating Co. is conducting an up-to-date establishment at Lewiston, having one of the best show rooms in the trade in that part of the country, as evidenced by the accompanying picture. Mr. Peterson, who is at the head of this concern, was formerly located in Spokane, where he had the reputation of being an exceptionally skillful worker in lead. A sample of his work in this line can be seen in the illustration.

The Showroom of Peterson Plumbing & Heating Co., in Lewiston, Idaho.

California

San Francisco and Vicinity.

Business structures continue to form the bulk of the current business in San Francisco, although homes and other small jobs are keeping plumbers in nearby sections busy at this time. Twenty-four class A structures have been contracted for in San Francisco during the past week, the largest being the University of California building of seven stories, to be erected on Sutter Street, between Montgomery and Kearney Streets, by the Regents of the University. The structure is being planned for Yawman & Erbe and Robt. Atkins, who have taken a long term

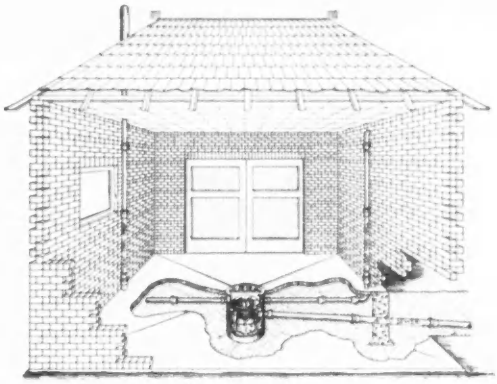


Fig. 62. Patented

Class "B" Garage here illustrated is designed as a Public or Private Garage in which approximately from one (1) to ten (10) automobiles are to be housed.

Fig. 62 "Peerless" Garage Floor Drain, 20" diameter of top and not less than 30" deep, will fill the requirements of a Class "B" Garage.

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Low operating cost.
A controlled heat—automatically raised or lowered at desired hours.
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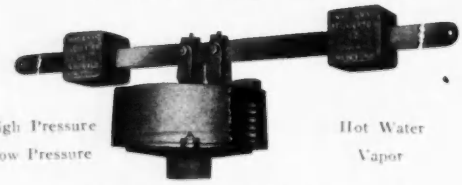

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lease on the property. Willis Polk is the architect, and bids will be called for shortly. Bids have been asked on the ten-story class A structure at the corner of Main and Market Streets for the Matson Navigation Co. James Reid is handling this building, which will be erected in the coming fall. Several large jobs are scheduled for the east side of San Francisco bay. The largest of these will be a new cannery and cold storage plant for Libby, McNeill & Libby. Plumbing work is being started this week on the Physicians' building in Oakland, and will be begun next week in the new Southern Pacific building in San Francisco.

The Pierce Well Pipe Works has announced its intention of establishing a factory at East Oakland, on the east shore of San Francisco bay, shortly. The plant will cost in the neighborhood of $30,000, and irrigation piping will be manufactured.

The Richmond Sanitary Manufacturing Co. has given up its old quarters at 462 Bryant Street, and is now established in newly furnished sales and show rooms at Second and Harrison Streets.

The Atlas Heating & Ventilating Co. has been awarded the contract for installing the heating and ventilating system for the St. Thomas. The contract amounts to $2,300.

Much work throughout the state is expected this summer due to the activities of the State Commission of Immigration in superintending the erection of sanitary bunk houses on ranches throughout California.

Other Cities in the State.

Bids have been called for by the Board of Public Service Commissioners, of Los Angeles, for a considerable quantity of 3- and 6-inch standard wrought iron pipe, and a number of meters and gate valves.

The workroom of the J. C. Dunn Hardware & Plumbing Co., at Fillmore, is being enlarged, and up-to-date machinery will be installed.

John Endirt, Jr., of Crescent City, has moved his plumbing establishment to Brookings, Ore., a few miles across the state border line.

A new high school, to cost $60,000, is soon to be built at Oroville. Bids on the various parts of construction will be called for at an early date.

George Ryman and Joe La Forti, of Los Banos, have filed a certificate, stating they will do business under the name of the West Side Plumbing Co.

Bids are to be called for shortly on the new union station at Los Angeles, to be erected at the present site of the Santa Fe's La Grande station by the Santa Fe and the Los Angeles and Salt Lake railroads. This latter road was incorrectly mentioned last week as the San Pedro, Los Angeles & Salt Lake Railway.

John Uffen has purchased H. A. Ewing's plumbing business at Santa Paula, and will continue it at the present location.

Mrs. Mary E. Murphy, of San Francisco, is to erect a new tourist hotel at Santa Monica, to cost in the neighborhood of $250,000.

Pennsylvania

Philadelphia and Vicinity.

W. J. McCuliff, of 5940 Haverford Avenue, has secured the contract for the installation of plumbing and heating systems in a row of residences which are being erected on Elmwood Avenue.

H. W. Wilcke, of Hatboro, has secured the contract for the installation of plumbing and heating systems in a new factory building, which is being built in that town.

Connecticut

The William P. Kirk Co., which has been established for many years on Fairfield Avenue, Bridgeport, has removed to a new location at 749 Main Street. The firm is one of the principal plumbing, heating, ventilating and power plant piping concerns in the city. The company's activities also extend outside the city. The new home at 749 Main Street is a model building throughout. It has just passed out of the hands of the contractors and been accepted by the Kirk interests.

John W. Murphy and Martin T. Sheehy have bought the plumbing business of W. P. Birdy on West Street, Bristol. The new owners have long been employed in the plumbing business, recently with the F. A. Shaffer Co. Mr. Birdy has not yet announced his plans for the future.

The Bridgeport plumbing firm of Seidel & Abramowitz has moved from 667 Madison Avenue to large quarters at 245 Madison Avenue. The firm recently has been awarded the contract for plumbing and heating in a house on Beechmont Avenue for James Grosse.

Contracts recently have been let in connection with two houses to be erected on Dixon Street, Bridgeport, for Marion L. Hughes. Carlson & Benson will install the plumbing and heating systems.

Harry J. Kennedy, of New London, has the plumbing contract, and John H. Newman, also of New London, the steam heating for a three-story modern brick business block, to be erected in that city, for James T. Sexton. The first floor will be used for stores and the upper floors for professional offices.

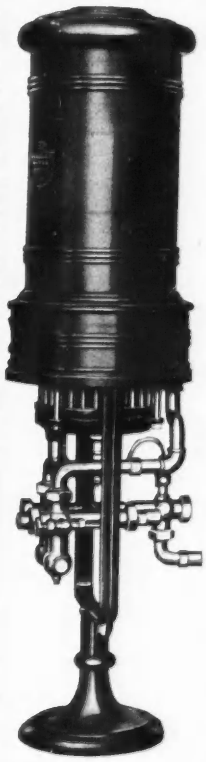
F. C. Booth, of Bridgeport; George Wigglesworth, F. F. Hitchcock, of Woodbury, and Frank C. Brady, of Bridgeport.—From "Domestic Engineering" Photo, taken at Connecticut Master Plumbers' recent Convention in Hartford, Conn.

Maine

A contract for heating and ventilating work on the Lincoln school building has been awarded by the board of education of that city to J. H. Cogan Co., of Augusta. The contract price is about $6,000, and calls for the work to be done during the summer vacation.

Officials of the town of Freeport have advertised for proposals for the erection, heating and plumbing of a new school building in that place.

Efforts toward securing a public convenience station at



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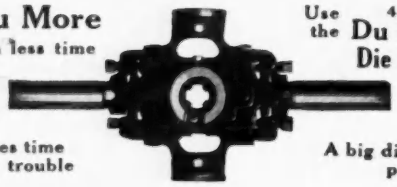

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Use these six cans according to directions to clear waste and drain pipe stoppages. If the Solvent does all we claim for it you are to send us $3.60 (special price for plumbers) within ninety days. If not the trial costs you nothing.

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Portland, a subject which has been agitated for many months, have not been relaxed. The Portland Chamber of Commerce, one of the leaders in the movement, has again brought the matter to the attention of Mayor Chapman, urging that if the city is not prepared to supply now a permanent station that some temporary arrangement be made for the convenience of the public during the coming summer months, when Portland is visited by thousands from other cities and states, many of whom change cars in Monument Square, or spend a few hours in the city en route to other resorts.

Hector Monier, who conducts a plumbing establishment at Biddeford, met with a serious accident recently, having his left knee dislocated in a fall. He was assisting in loading a consignment of radiators onto his truck at the freight station, when one slipped, throwing him from the platform in such a way as to dislocate his knee. Physicians said his injury was a bad one, and that it will take some time before he fully recovers from the effects of it.

Massachusetts

Boston and Vicinity.

Master plumbers throughout the state are doing their bit to help make the Liberty Loan a success. Many master plumbers have subscribed for bonds of different denominations, and others are assisting their employes to subscribe. The Boston Association has sent letters to all members urging them to do everything possible to help their employes and to do all they can, personally, to make the loan a success. Other associations also have taken the matter up.

Three former national presidents will be accredited to the Master Plumbers' Association of Boston and Vicinity at the annual national convention in Evansville this month: David Craig, D. J. Finnerty and James S. Cassedy. These three, with President E. W. Cox, are ex-officio delegates. Others elected to represent the Boston association are: Andrew F. Curtin, Edward C. Kelly, W. P. Kane, J. Preston Perham, William N. McKenna, Orren C. Poole, C. B. Tucker, Charles H. Smith, P. A. Lang, Frank B. Connor, N. J. Kelley, W. H. Monks, D. J. Shannon and Jonas A. Larraway. As alternates the association has named: A. E. Roberts, W. B. Johnson, W. P. Jones, D. J. Keefe, C. H. Cronin, J. P. Williams, J. W. Zehringer, J. J. Vogel, B. F. Godfrey, C. J. Murphy, J. C. Kelley and E. J. Fennessey.

The lecture on the "Making of a Range," given before the Boston association on Tuesday evening, May 22nd, by William H. Perkins, of the Walker & Pratt Mfg. Co., was declared by members to have been one of the most interesting and instructive talks of the kind that the organization has had. It was illustrated with moving pictures.

Newspaper comment regarding the opening in Manila this month of a night course in plumbing, electric wiring and other trades, has attracted much favorable discussion among master plumbers. The "Haverhill Gazette," discussing the plan editorially, says: "The need for such a class has been felt for a long time, and the bureau of education has finally decided to undertake the project. The building has been provided, necessary equipment installed and teachers engaged for the work. In deciding on the proposition the board of education realized that the expense of maintenance would be more than balanced by the effect a band of competent young Filipino plumbers would have on the sanitation system of the Philippines."

The town of West Springfield is having plans prepared for a central heating plant to take care of two grammar

school buildings in the Mittineague district. New heating plants were needed in the school buildings, and the town officials decided to take the opportunity to install one plant sufficient to care for both and at the same time remove all fire danger from the buildings.

Stanford Bros., of Springfield, have been awarded the contract for plumbing in connection with a large new garage being erected on State Street, for Smith Bros.

John Gustafson & Son Co., of Worcester, will do the plumbing, and the Cleghorn Company, of Boston, the heating in a hospital to be erected at Adams for W. B. Plunkett, who will present the completed building to the town. It will be a most modern structure in every particular with all the latest hospital conveniences.

New Jersey

Newark and Vicinity.

John Pfarr, of 164 Watson Avenue, Newark, has the contract for installing plumbing in a new apartment building on Second Avenue, for Dehlses Stein. He will also do the plumbing in a new residence at Arlington for G. Staehl. W. Lawson Co., of 45 Clinton Street, Newark, has the contract for the heating in the latter building.

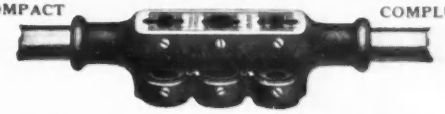
Harry S. Transue, Hugh O'Donnell and Wm. S. Wagner; all of Phillipsburgh, N. J.—From "Domestic Engineering" Photo, taken at New Jersey Master Plumbers' recent Convention in Jersey City.

H. Y. Carson, of the Central Foundry Co., New York, delivered a lecture before the Newark Association of Master Plumbers on Tuesday evening, May 29th, on "Drainage and Venting." He illustrated his talk with lantern slides. Many association members from surrounding towns, as well as city plumbing department officials and supply men, were in attendance.

Other Cities in the State.

Plans are being prepared by Architect A. F. Gilbert, of New York City, for a new $3,500,000 hotel to be erected on the Boardwalk, Atlantic City, by the Atlantic City Hotel Corporation.

R. G. Jenkins, of Boonton, has the heating contract on a new residence on Cornelia Street, for Parker H. Sweet.

COMPACT COMPLETE

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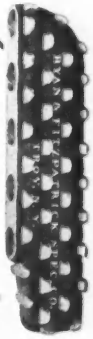

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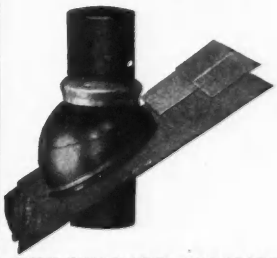
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New York

New York City and Vicinity.

Among extensive additions being made at the Brooklyn Navy Yard by the government will be a new $1,000,000 structural shop.

William Malcolm, of Yonkers, will do the plumbing work in a new private garage on Riverdale Avenue for the Ludlow Estate. Williams & Cullinan have the contract for the heating work.

W. C. Blitz, of Douglaston, L. I., has the contract for the plumbing and heating work at the residence addition of Nathan Doyle on Willow Street.

W. J. Olvany, of 177 Christopher Street, Manhattan, will install the heating system in the Rolls-Royce Co.'s new garage and service station in Long Island City. The Cully Co., of 584 Hudson Street, secured the contract for the plumbing.

The Johnston Heating Co., of Manhattan, has the contract for the heating work in the addition to the Firemen's Home at Hudson.

J. P. Machamer, of 26 Oxford Avenue, Brooklyn, will install the plumbing in two new residences on Ridgewood Avenue for W. H. Hurst.

J. C. Williams, Inc., of Manhattan, has secured the contract for the heating work in the new station and trainmen's building of the New York Municipal R. R. Co., at Jamaica, L. I. J. S. Murphy, of Manhattan, will install the plumbing system.

John Harrison, of Yonkers, will do the plumbing work in the new $20,000 building of the Chippewa Club on Lake Avenue.

Other Cities in the State.

A new public school will be erected at Pawling. A J. Hopkins, of 101 Park Avenue, New York City, is the architect.

James Warren, of Albany, is installing the heating system in St. Joseph's R. C. Church, at North Creek.

Cornelius Dwyer, of Amsterdam, has the contract for the heating work in the new Academy Street grade school. The plumbing will be done by M. J. Devine.

Barr & Creelman, of Rochester, have the contract for the plumbing work at the Flower City Tissue Mills Co.'s new factory building.

Arensmeyer, Warnock & Zahrndt Co., of Rochester, will install heating and plumbing systems in the new Bible house of the Lyell Avenue Baptist Church.

Herman Brandeles, of Utica, is installing the plumbing and heating in the new addition to the Crescent Bread Co.'s bakery.

Hessee & Scharff, 451 Columbia Street, Utica, will do the heating and plumbing work in a new $10,000 residence at New Hartford for F. R. Winslow.

Havens Plumbing Co., of Elmira, will do the heating work in six new residences, being erected by the Elmira Foundry Co.

Howe & Bassett Co., of Rochester, has the contract for plumbing the addition to the Nathaniel Hawthorne School. The heating will be installed by Arensmeyer, Warnock & Zahrndt Co.

The American Warming & Ventilating Co., of Elmira, will do the heating work in the new public school at Collins.

J. T. Sadler, of Elmira, has the contract for heating work in the new Chemung County Tuberculosis Hospital.

Michigan

Detroit and Vicinity.

In making the rounds of plumbing and heating contractors we find an unusual condition in Detroit, for this particular time of the year—more than the customary amount of spring work, prices unusually high for material and labor, and skilled help scarce. Some concerns who planned extensions have pulled in their horns, so to speak, owing to the war and the high prices, but many, many others are going right ahead, despite the war, and are paying the increased prices, and are glad to do it. For instance, in big work alone at the present time there is something like $22,000,000 in course of construction, with any number of big contracts yet to be let. It's a fact that the half-mile circle of Detroit is going to see tremendous changes in the coming two years, and in many instances bonds have been given to guarantee the erection of the buildings within the next two years. The writer knows of three or four 14-story structures not yet announced which are certain to be erected.

The Detroit master plumber and steamfitter is not worrying in the least about securing business, but is much more concerned with securing materials and supplies, and sufficient help. The high wages in the motor car factories have attracted many journeymen plumbers, and it's not an easy task to get men when you need them most. Then the railroad deliveries are far from being normal, shipments being both slow and unsatisfactory.

Joseph A. Roe, manager of Crane Co.'s Detroit branch, speaks of current conditions, as follows: "Orders have increased beyond reasonable expectation. Sales have been extraordinary, running proportionately much larger than ever. Besides the normal trade, we are getting government contracts right here in Detroit. Many more of these will be awarded presently to our various industries, and business will boom as never before."

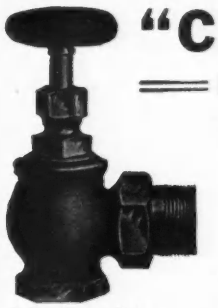
According to the annual report of Charles Fox, plumbing inspector of Lansing, a total of 1,549 plumbing permits were issued in that city for the year ending April 30th. Master plumbers' licenses to the number of 24 were issued during the year.

Indiana

Indianapolis and Vicinity.

The value of building operations in Indianapolis for the month of May show a loss, compared with the value of operations for the corresponding month of last year, according to reports completed by Henry Hudson, chief clerk in the department of buildings. A total of 545 building permits was issued during the month and the value of operations was $640,198. During May, 1916, a total of 772 permits was issued and the value of operations was $860,030. The value of operations for the first five months of the year shows an increase of $20,280 over the corresponding period last year. The value of building operations since the first of the year is $3,402,-193, compared with $3,381,913 during the corresponding period of last year.

Roads & Troyer, plumbing and heating contractors of Logansport, have dissolved partnership and a new partnership has been formed which hereafter will be known as Roads & Tompkinson. Albert Tompkinson, Jr., the new member of the firm, is from Fort Wayne, where he has been in the plumbing business with his father for the last fifteen years.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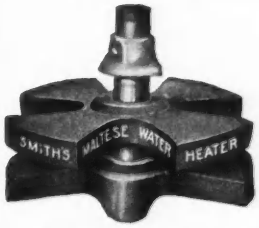
HIGH GRADE
Radiator Valves
All Valves thoroughly tested and inspected before shipment.
J. D. Steam Union Radiator Valve
Capitol Brass Works
DETROIT, MICH.

A Show Room Necessity
Display your plumbing fixtures in a lifelike way. Mount them on
FANNING
DISPLAY STANDS
where they may be set up showing all pipes and trimmings in their proper places.
An investment that pays good returns. Write for Circulars and Prices.

Benjamin Fanning
1 Exchange Street
Rochester, N. Y.

Smith's Jointless Hot Water Attachments


are the ONLY ones that give water circular motion and that have no obstruction to the natural movement of the water.
Smith's Maltese Heaters
are made in 8 sizes—can be used in any furnace.
Easy to Install. Highly efficient. Thoroughly tested.
Write for Catalog.
Charles Smith Company
Lake and Dearborn Streets Chicago

Use Only the
ORIGINAL
Double Drainage Drains
The Name Protects You

Look for "JOSAM" on Every Drain
Made by
JOSAM MFG. CO.
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EASTERN BRANCH. 261 Broadway, NEW YORK

Eagle All Lead Roof Flange

LEAD PIPE — Length, 6 inches; Diameter, 4½ inches
SIZE OF APRON — 15 inches Square
Made in Angles, 45 deg., 22½ deg. and Straight.

No Caulking To Be Done
Joints Lead-burned—No Solder Used

Flexible Adjustable Economical

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Manufactured only by

The Eagle-Picher Lead Co.
CINCINNATI, OHIO

Little Giant Expansion Screw Sleeve

Expansion begins at first turn of screw, and is even and uniform entire length of sleeve.
Does not require pipe sleeve or wedge nut.
Write for prices.

STANNARD MFG. CO. Springfield, Mass.

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We are supplying some of the most prosperous Brass Goods Manufacturers with our

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Why not join them?
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2511 to 2525 W. 21st St. Chicago

Dole PACKLESS GRADUATED RADIATOR VALVE

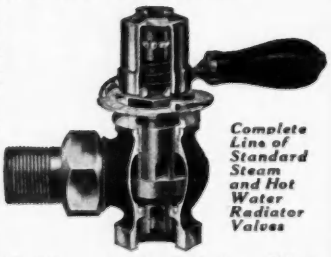
Embodies a new and exclusive DOLE principle by which you can have every degree of opening required in vacuum or vapor steam heating.

This Adjustment is easily made while the steam is on.

Nothing like it on the market.

Furnished with the DOLE **without extra cost.**

Write for new circulars.



Complete Line of Standard Steam and Hot Water Radiator Valves

THE DOLE VALVE CO. 208 No. Fifth Ave. Chicago

John Harrell & Son, of 1523 North Dearborn Street, Indianapolis, will do the plumbing in three new modern bungalows that are being erected at Harvard Place and Cornelius Avenue, for the J. S. Cruse Realty Co.

James A. Diggle, of 214 North Delaware Street, Indianapolis, has been awarded the contract for the installation of the plumbing and heating systems in a new four-story confectionery building that is to be erected at 36 East Washington Street.

Other Cities in the State.

The Holland Plumbing Co., at Logansport, will install the plumbing in the new $3,000 addition to Mrs. Fannie Snyder's residence.

The Lane, Pyke Co., of 657 Main Street, Lafayette, has obtained the contract for the installation of the plumbing in the new $250,000 government armory that is to be erected in West Lafayette. The heating system will be installed by Wallace Bros., of 306 North Fourth Street, Lafayette.

Victor Knauth, of 303 South Third Street, Vincennes, will do the plumbing and heating in the new addition to the two-story high and grade school at Union.

Beal Bros., of Rushville, have received the contract for installing the plumbing in a new $8,000 residence that is being erected for Elmer Hutchinson, at Arlington.

Kentucky

Louisville and Vicinity.

The Board of Directors of the Louisville Master Plumbers' Association held a meeting on Friday, June 1st, to consider plans to be recommended to the association in connection with the attendance at the annual convention of the National Association of Master Plumbers, at Evansville, Ind., on June 19th to 21st. Due to the nearness of Evansville, it is thought that Louisville will have an unusually good attendance at the meeting.

J. J. Bosemer has taken out a permit for the plumbing in the new L. Jacobson apartment at 1026-1032 South Fourth Street. The contract calls for forty-two complete bath rooms, twelve sinks, 15 spouts, etc.

News was received in Louisville last week of the capture and imprisonment in Dulmen, Germany, of Leslie E. Pedigo, a former plumber of Louisville. Mr. Pedigo left Louisville nearly two years ago, and was an engineer on the steamer Esmeralda, which was torpedoed by a German U boat in the North Sea in March.

Other Cities in the State.

O. G. Gillum, of Jackson, has organized the Gillum Garage and Plumbing Shop, having leased the old Smith building. A general plumbing and garage business will be conducted.

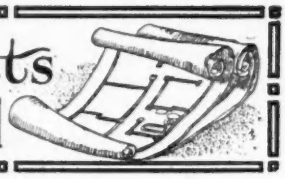
A nice contract for installation of the plumbing in the new hotel at Roda, Va., was recently secured by W. G. Coutts, of Harlan, Ky., who has been handling a lot of work in eastern Kentucky and across the Virginia line.

The Irvine Water Co., of Irvine, has let contracts for installation of a six-inch water main, to be laid prior to constructing the new city streets. A temporary water line is now being laid to supply water for construction work and also for the Wells Hotel.

Carl Hineman Burwinkle, in the plumbing business with his father, J. H. Burwinkle, in Louisville, will soon be married to Miss Mary Priscilla Rowland. The announcement was made on Sunday, June 3rd.

The Richmond Heating & Plumbing Co., of Richmond, has filed a voluntary petition in bankruptcy in the Federal Court. Slow collections are given as the cause of the failure.

Contracts Awarded



Galena, Ill.—John F. Myers, of this city, has secured the contract for the installation of up-to-date plumbing in the new St. Mary's School.

Camden, N. J.—E. T. Jackson, of Broadway, has secured the contract for the installation of plumbing in Stanwick & Scott's new factory in this city.

Peoria, Ill.—John O'Neill & Son, of this city, will install the plumbing system in the new Farmers' State Bank Building at Lewistown, Ill.

Mexico, Mo.—Charles P. Berger will install plumbing and heating systems in the new building at the Missouri Military Academy.

Warsaw, N. Y.—Webster Case Hardware Co. will install the plumbing and heating system in the Wyoming Trust & Bank Building in this city.

Columbus, S. C.—H. J. Bassier Co. has secured the contract for the installation of plumbing and heating systems in the State Park Tuberculosis Building.

York, Pa.—The York Heating & Ventilating Co. will install the heating system in the Broadway and Charles Street School. The contract amounts to $4,424.

Grand Rapids, Mich.—The Pulte Plumbing & Heating Co. has been awarded the contract for the installation of an up-to-date heating system in the Monastery of Visitation.

Camden, N. J.—Peterson & Singer have secured the contract for the installation of a heating system in the Supplees Dairy building, which is being constructed in Atlantic City.

Aberdeen, Wash.—Elway & Miller have been awarded the contract for the installation of up-to-date plumbing in the new eight-room grammar school in this city. Consideration, $2,290.

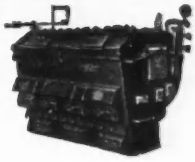
Butte, Mont.— Magill-Nevin Plumbing & Heating Co. has secured the contract for the installation of plumbing and heating systems in Arthur H. Miller's new apartment building. The contract amounts to $45,000.

Decatur, Ill.—W. T. Delahunty & Co., of 219 North Main Street, have been awarded the contract for the installation of plumbing and heating systems in the new Jarman Hospital at Tuscola, Ill. Consideration $6,000.

Deer Lodge, Mont.—The O'Neil Hardware & Plumbing Co. has secured the contract for the installation of plumbing and heating systems in Powell County's new high school building in this city. The contract amounts to $15,161.

Summer School In Engineering.

The nineteenth annual summer session of the College of Engineering of the University of Wisconsin will be held at Madison during the six weeks' period beginning June 25, 1917. Special courses will be given in Chemistry, Electrical, Steam and Hydraulic Engineering, Gas Engines, Machine Design, Mechanical Drawing, Mechanics, Shop Work, and Surveying. All courses given in the University Summer Session are open to engineering students. Special courses have been arranged for engineering, manual arts, and vocational teachers. F. E. Turneaure, Dean, Madison, Wis., is in charge of this department.

ECONOMY  EFFICIENCY

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Saves Fuel Labor
Manufactured only by
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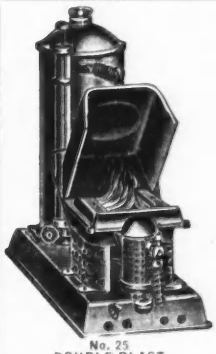
RADIATION ESTIMATING CHART
Gives the Required Amount of Radiation to Heat

Cubic Contents from	900	and	above
Wall Exposure from	45	and	above
Glass Exposure from	6	and	above
For Steam Outside	0	70°	Inside
For Water Outside	0	70°	Inside
For Vapor Outside	0	70°	Inside
For Vapor Outside	—10	70°	Inside
For Vapor Outside	—20	70°	Inside

Send one dollar and we will mail you a copy.
BOTTUM VALVE COMPANY
213 W. Schiller St., CHICAGO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DOUBLE BLAST
Tinners' Fire Pot, $7.25

Results Are What Count

Mechanics who use DOUBLE BLAST Gasoline Fire Pots know that the maximum amount of heat can be obtained from the minimum amount of fuel, by using a DOUBLE BLAST.

The letters of the words, "DOUBLE BLAST," aptly represent many important and superior points in the construction and operation of the DOUBLE BLAST. Read them over.

Double Burners
Odorless
Unrivaled
Blue Flame
Lasting
Economical
Best
Labor Savers
Aluminum Bronzed
Safety
Time Savers

Leading jobbers handle them. If your jobber does not handle them, send us your order and we will ship direct. Additional information and circulars will be furnished upon application.

Double Blast Mfg. Co.
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THE HAYDENVILLE COMPANY TRADE H MARK

"Quik - Ope"
Compression Goods
Most reliable line on the market.
Opens exactly on 1-4 turn. Positive action.
Valve can't work open and leak.
The improved stuffing box does the trick.
Made of red metal. Incomparable finish. Triple nickel plated.
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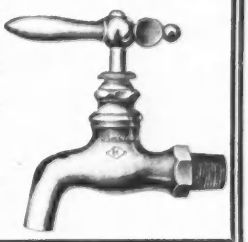
Write for latest Catalog.
Made exclusively by
THE HAYDENVILLE COMPANY
Haydenville, Mass. New York City
Established 1845
Makers of Fine Brass Goods



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Automatic Air Valves Floor and Ceiling Plates

Standard of Perfection

Write for Descriptive Matter

W. A. RUSSELL & CO.

63 W. 37th Street New York City

No. 2A Thermostat

ROBERTSHAW MFG. CO. YOUNGWOOD, PA.

The standard for 30-40 gal. boilers, and single coil heaters or equivalent. Has ⅜-in. gas openings.

We Make All Sizes

Peerless Steel Sink Brackets

Strongest made. Detachable brace makes them easiest to install.

Compact. Require only 15% space of others.

Sizes for sinks from 14 to 22" wide.

Write for circulars, prices and discounts.

THE BERGER SPECIALTY MFG. CO., Inc.

118 W. 29th Street, RICHMOND, VA.

Brooks Lawn Sprinkling System

Frost-Proof-Underground

Write For Sample Sprinkler and Booklet

2358 Fulton St., JOHN A. BROOKS Toledo, O.

Makes No Noise

A Quiet Pump in Your Home

You can keep Pump noise out of your home by keeping out the kind of a Pump that makes a noise.

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Dayton, Ohio, U. S. A.

American Hot Water Heating System

Tank-in-Basement Method

Costs less to install—saves fuel—gives better service all round.

Write for circulars.

AMERICAN HEATING SPECIALTY CO.

Peru, Indiana

VAPOR MOUAT HEATS

The Mouat Graduating Vapor System is SAFE and SANITARY because it is a PURE vapor system and Mouat patented features make it ECONOMICAL and EFFICIENT. Learn about the Mouat Regulator.

THE MOUAT SQUIRES CO.

124€ W. 4th St., Cleveland, O.

Filters for Swimming Pools

All Types for All Purposes

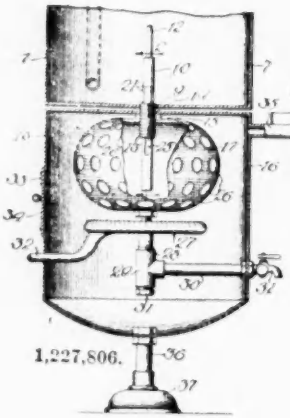
The New York Continental Jewell Filtration Co.

New York Chicago Kansas City

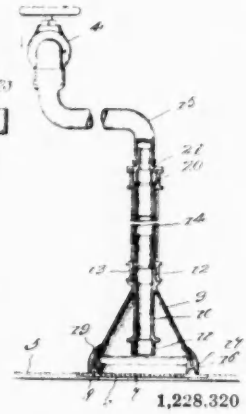
Montreal San Francisco

Plumbing Department.

1,227,806. Water-Heating Apparatus. Samuel Leavitt, Chicago, Ill. In a water heating apparatus, the combination with a reservoir, a water heater and a single pipe directly connecting said reservoir and heater, said pipe having a plurality of channels extended longitudinally thereof, at least one of said channels having communication at one of its ends with the reservoir near its bottom for the outlet therefrom of cold water into the said heater, and at least another of said channels having communication through its upper end and the upper end of said pipe with the reservoir and through its lower end with the heater near the bottom thereof, a fuel burner located below the said heater and being independent thereof, a housing surrounding said burner and heater and mounted on the aforesaid pipe, means to support the housing at its bottom, a drain pipe leading from the lower portion of the heater and having a section extended from its lower part through the housing to assist in supporting the latter, a faucet on the outer portion of said sectional pipe, and a supply pipe leading from a source of fuel supply through the wall of the housing and connecting with said fuel burner.



1,227,806.



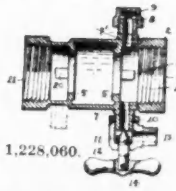
1,228,320

1,228,320. Apparatus for Cleaning Sinks, Etc. Eugene Guillot, Helena, Mont. A device of the character described including a substantially conical hood having a gasket, with an annular depression therein, secured to the enlarged end of said hood, and a pipe passing through the apex of said hood and having nozzles at both ends, one on the interior and the other on the exterior of said hood for receiving fluid supply connections, substantially as described.

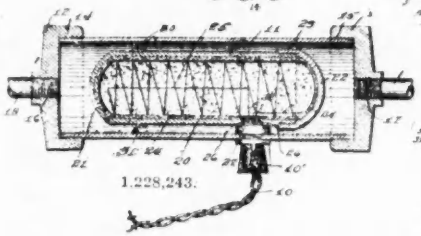
1,228,060. Stop and Waste Valve. Fred Schulder, Cleveland, Ohio, assignor to United Brass Manufacturing Company, Cleveland, Ohio, a partnership composed of Wm. J. Schoenberger and Benjamin F. Klein. A valve body having a main water passage through the same and a valve adapted to open and close said passage and provided with a waste nipple at one side open to the delivery end of said valve body, in combination with an elbow shaped waste discharge member rotatably engaged with said nipple, and a valve for said nipple engaged in said

member, and means to lock said discharge member in different set positions upon said nipple.

1,228,243. Water-Heater. Frederick Poole, Jewell, Kan. A water heater including a casing interposed in a pipe line, a second casing within said first casing having a removable closure cap, an insulating lining for the second casing and the closure cap, an electrical heating element in said second casing, a connecting plug carried by the main casing and connected to said heating element, and a



1,228,060.



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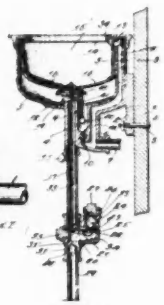
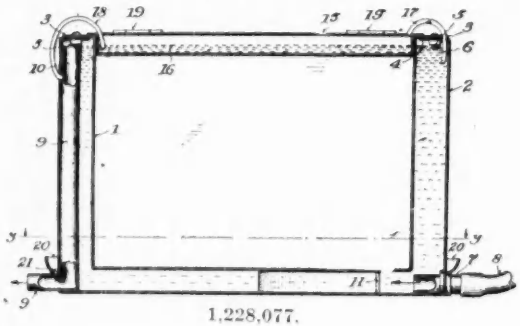


1,228,224.

spacing band arranged about the second casing for maintaining the same in spaced relation from the first casing.

1,228,224. Drinking-Fountain. Willis W. Luke, Milton A. Russell, Lewis R. Kennedy, and Charles E. Anderson, Fairfield, Iowa, assignors of one-fourth to said Anderson, one-fourth to said Luke, one-fourth to said Kennedy, and one-fourth to J. P. Foreman, Fairfield, Iowa. A drinking fountain of the class described comprising a drinking receptacle, a water supply means, a bracket supporting said drinking receptacle, said bracket provided with a drain pocket, means for operating said drain pocket to be manually closed when so desired, an automatic valve for closing said drain pocket when water is being admitted to the drinking receptacle, and being adapted to be raised to an inoperative position for permitting said drinking receptacle to be automatically drained when the supply of water has been cut off, and said bracket provided with an overflow tube extending vertically of said drinking receptacle.

1,228,077. Water-Cooled Refrigerator. Katherine A. Thompson, Milwaukee, Wis. In a device of the described class, the combination of a provision receptacle and an inclosing receptacle surrounding such provision receptacle upon all sides except upon that side occupied by the



1,228,077.

door, a cold water chamber located between said receptacles, a duct adapted to conduct water from a supply to said cold water chamber, a door or cover provided with a cold water space, a flexible duct communicating from

DO YOU USE A "NATIONAL" TELESCOPE?

Look For

NATIONAL

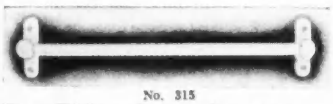
The Name

¶ If you cannot answer this question, you have missed last week's issue.

¶ Just as a telescope is necessary to see the wonders of the firmament, so only through "NATIONAL" Pipe can the value of "NATIONAL" qualities be appreciated.

¶ Turn to pages 4 and 5 now, and look at the qualities of "NATIONAL" Pipe by the aid of the "NATIONAL" telescope!

NATIONAL TUBE COMPANY :: Pittsburgh, Pa.



No. 315

ALL WHITE RIGHT

Vitreous China Bath Room Fixtures. Write for Circulars and Discounts.

Made and Guaranteed by

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Originators of this type of Bathroom Fixtures

F. & W. Electric House Pumps

are of large capacity, economical, silent in operation, and easily installed. *Send today for bulletin.*

FLINT & WALLING MFG. CO. KENDALLVILLE, INDIANA

GUARANTEED DURO MADE BY THE BURNETT-LARSH MANUFACTURING CO. DAYTON OHIO

THE THREE ESSENTIALS

PRICE—QUALITY—SERVICE

are all combined in

"DURO"

—GUARANTEED—

ELECTRIC HOUSE PUMPS and RESIDENCE WATER SUPPLY SYSTEMS

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The Fast Coming Closets

Entire satisfaction to everybody. Leakless—Foolproof—Silent. Fully Guaranteed.

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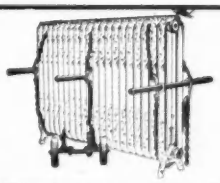

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is the steamfitter's best friend. Handiest device ever made for carrying radiators through narrow halls and difficult places. Write for details and prices.

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FULTON, N. Y.

STANDARD PORTABLE VISE BENCH AND PIPE BENDER

Saves more than its cost on the first job. Set up in a minute without any tools. Always ready. Lasts a life time. Thousands in use.

Drop us a line and we will mail you names and addresses of thousands of satisfied users.

STANDARD IRON WORKS
508-10 E. 74th Street, New York City

Phillips High Speed Drills

For drilling all size holes, ¼ to 1½" in concrete, brick and stone, in walls, floors and ceilings, for expansion bolts, pipe hangers, etc. Write for folder. Manufactured by

Daugherty-Smith-Phillips Co., 500 W. Division St., Chicago, Ill.

Quiet as a Mouse

The ball cocks furnished in Pfau's Metal Tanks will work under either a high or low pressure, and are more nearly noiseless in their operation than any other ball cock now on the market.

Pfau's New Big "Mercuroid"

Tank is a new addition to the Pfau line. The little fellow made such a smashing hit we decided to give it a big running mate.
The large size "Mercuroid" tank shown is our No. 4-M equipped with a full-elevated ball cock with compound levers and solderless, corrugated copper float. The flush valve is extra heavy and is furnished with a 1¼" overflow tube. Besides the addition of the large size tank to this line, we are also furnishing copper tanks finished in white or in imitation golden oak or mahogany.

Ask Your Jobber

THE

Pfau Mfg. Co.

Cincinnati, Ohio

Going to Sea Unprepared for Storms

is like using a steam valve that leaks.
Compare your steam heating contracts with a ship prepared for a long voyage.
If you want your job to "get across," prepare it for the most rigid tests and examinations. To do this you must use the best of everything, including

Lavigne
Packless Quick-Opening Steam Radiator Valves

They will anchor your customers in the quarantine of satisfaction and pilot your earnings into the harbor of profit.

See that you get LAVIGNE and no substitutes.

All good jobbers handle them.

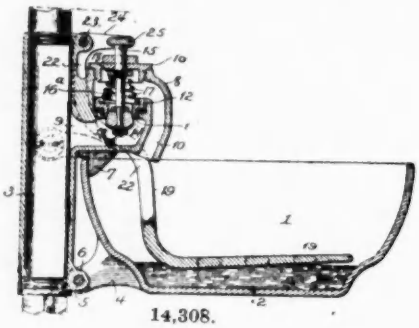
Lavigne Manufacturing Company

Detroit, Michigan

the cold water chamber located between said interior and exterior receptacles to the cold water space in said door or cover, an additional flexible duct communicating from the cold water space in said door or cover to the outlet duct of said first named cold water chamber, a drip trough located near the lower side of said device, provided with a discharge opening leading to the outlet duct.

Reissued.

14,308. Watering Device for Cattle. Hugo C. Rassmann, Beaver Dam, Wis. In a watering device for animals, the combination of a water pipe having a valve controlled outlet, a bowl in front of said pipe, means for

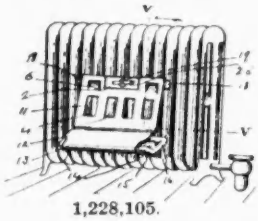


14,308.

hinging said bowl at the side thereof nearest the water pipe, latching means for holding the bowl in horizontal position, and animal controlled means projecting into the bowl beyond the arc made by the upper edge of the bowl nearest the hinged side thereof, for actuating the valve in said valve-controlled outlet.

Heating Department.

1,228,105. Foot-Warmer Attachment for Radiators. Elmer J. Funk, Kansas City, Mo. In a foot warmer attachment for radiators, the combination, of a supporting member comprising a bar having its end portions bent forwardly and then inwardly paralleling the bar to form opposed spaced arms and attaching means mounted on the bar between the terminal ends of said arms, a foot rest member comprising a shelf portion having its end portions cut away and its front turned under to form pivot



1,228,105.

bearings, the back portion of the shelf being provided with rearwardly and downwardly extending spaced apart integral hooks supportingly engaged by the arms on the supporting member, the terminal end portions of said hooks being bent inwardly to form stops below said arms, and with rearwardly inclined spaced apart integral stops presented to the front side of said arms and opposed to said hooks, said back portion of the shelf being partially severed at intervals and the cut portions bent rearwardly to provide air passages and form ribs at the borders of the passages, and a brace pivotally mounted on said foot rest member and adapted to bear on a radiator rearwardly of the foot rest and supportingly engage the cut away portion of said shelf portion.

GOVERNMENT CONTRACTS TO BE AWARDED.

Supervising Architect James A. Wetmore, Treasury Department, Washington, D. C., will receive sealed proposals for government work as follows:

Until 3 p. m., June 15, 1917, for the construction, including plumbing and heating, of the United States postoffice at Chapel Hill, N. C.

Until 3 p. m., June 20, 1917, for the construction, including plumbing and heating, of the United States postoffice at Front Royal, Va.

Until 3 p. m., June 22, 1917, for the construction, including plumbing and heating, of the United States postoffice at Butler, Mo.

Until 3 p. m., June 22, 1917, for the construction, including plumbing and heating, of the United States postoffice at Fordyce, Ark.

Until 3 p. m., July 12, 1917, for the construction, including plumbing and heating, of the United States postoffice at Monessen, Pa.

Until 3 p. m., June 27, 1917, for the construction, including plumbing and heating, of the United States postoffice at Vineland, N. J.

Until 3 p. m., June 28, 1917, for the construction, including plumbing and heating, of the United States postoffice at Prescott, Ark.

Until 3 p. m., July 12, 1917, for the construction, including plumbing and heating, of the United States postoffice at Hoopeston, Ill.

Drawings and specifications may be obtained from the custodians of the various sites, or from the office of the Supervising Architect in Washington.

Civil Service Examination for Inspector of Heating and Ventilation.

The Municipal Civil Service Commission, of New York City, has announced an examination for Inspector of Heating and Ventilation, Grade 3, for which applications will be received at Room 1400, Municipal Building, until June 14th, at 4 p. m. From the resulting list appointments will be made to the Department of Education. The examination will consist of two subjects: Experience, 5; Duties, 5. The duties of an inspector of heating and ventilation is the preparation of specifications in accordance with the standards of the Department of Education for the equipment of school buildings, including engines, boilers and auxiliaries, fans, ducts and temperature regulators, and all auxiliaries in connection with the heating and proper conditioning of the air of school buildings within the borough to which the inspector may be assigned. He will also supervise the installation of the entire heating plant, and must be competent to attend to necessary repairs and maintenance and able to instruct janitor engineers in the care of their plant, and to make recommendations for improvement. Candidates must be at least 21 years of age, citizens of the United States, and residents of New York state. They must have had experience in installation, design or operation of heating plants and have served as foreman steamfitter, foreman heating engineer at factory or superintendent for a contracting firm or manufacturing establishment in installation of such apparatus, or superintendent in responsible charge of a heating or ventilating system in office building, or inspector for a public utility corporation supplying steam, or equivalent experience. The position pays a salary of $2,093.33 per annum. The Municipal Civil Service Commission, Municipal Building, New York City, will gladly give interested parties any additional information desired.

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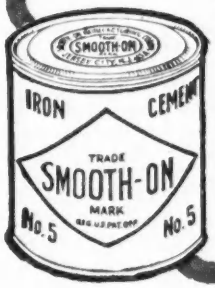

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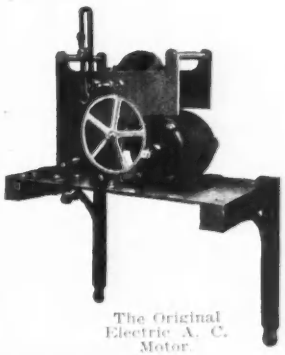

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WANTED—YOUNG MAN 18 to 24 EXperienced estimate clerk in wholesale plumbing and heating supplies. In reply state experience and salary wanted. Thomas Trant, 228 State Street, Hartford, Conn. 6-2; 9

WANTED—A GOOD HEATING AND ventilating engineer. One who is at present employed preferred. Must give good references as to his commercial and engineering ability and state salary expected. Address Moline Heat, Moline, Ill. 3-3 tf.

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Government Proposals.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 5, 1917.—Sealed Proposals will be opened in this office at 3 p. m., July 2, 1917, for alterations to heating, in the U. S. Custom House, etc., at Detroit, Michigan, in accordance with the drawing and specification, copies of which may be had at this office or at the office of the Custodian at Detroit, Michigan, in the discretion of the Supervising Architect. Jas. A. Wetmore, Acting Supervising Architect. 6-9; 16

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., May 28, 1917.—Sealed proposals will be opened in this office at 3 p. m., June 28, 1917, for a new heating system, plumbing repairs, etc., in the United States Marine Hospital at Portland, Me., in accordance with the drawings and specifications, copies of which may be had at this office or at the office of the custodian, Marine Hospital at Portland, Me. in the discretion of the Supervising Architect. Jas. A. Wetmore, Acting Supervising Architect. 6-9; 16

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 1, 1917.—Sealed proposals will be opened in this office at 3 p. m., July 2, 1917, for resetting four boilers and furnishing and installing steam-flow meters, feed-water regulators, etc., in the United States post office and courthouse at Kansas City, Mo., in accordance with the drawing and specification, copies of which may be had at this office or at the office of the custodian, Kansas City, Mo., in the discretion of the Supervising Architect. Jas. A. Wetmore, Acting Supervising Architect. 6-9; 16

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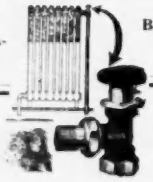

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